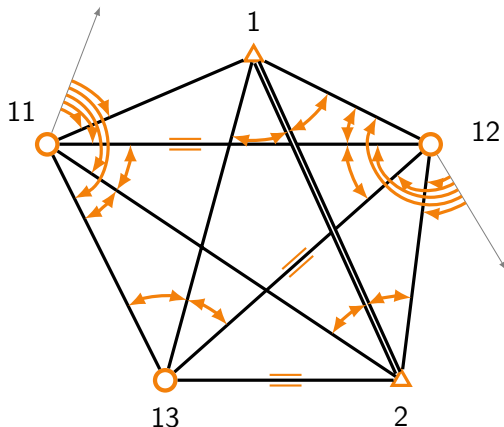


Wyrównanie sieci kąto-liniowej



Na podstawie danych dwóch punktów osnowy i obserwacji (na kolejnych stronach dokumentu, obok szkic tylko dla wybranego zestawu) należy wyrównać sieć metodą pośredniczącą. Policzyc:

- wartości wyrównane składowych punktów wyznaczanych,
- błędy tych składowych,
- błędy położenia punktów,
- elipsy błędu średniego,
- błędy wyrównanych obserwacji,
- błąd azymutu 11–12.

Po pierwszych zajęciach należy mieć policzone współrzędne przybliżone punktów wyznaczanych oraz elementy macierzy A , L i P odpowiadających za obserwacje co najmniej jednego typu. W skrypcie po drugich zajęciach powinny znaleźć się wszystkie obliczenia. Do sprawozdania (termin 1 tygodnia od drugich zajęć związanych z tym projektem) należy dołączyć szkic sieci i elips błędów.

Zestaw 1

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1903,623 | 1689,986 |
| 2 | 3119,404 | 1516,517 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,931 | 0,065 |
| 2 | 11 | 1481,994 | 0,068 |
| 2 | 13 | 839,833 | 0,038 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,8 |
| 13 | 1 | 43,47602 | 15,4 |
| 13 | 12 | 81,60015 | 13,6 |
| 13 | 2 | 130,38052 | 19,1 |
| 13 | 11 | 0,00025 | 14,8 |
| 12 | 2 | 0,00000 | 19,1 |
| 12 | 13 | 51,25806 | 16,7 |
| 12 | 11 | 99,37849 | 18,2 |
| 12 | 1 | 124,78056 | 14,2 |
| 12 | 2 | 0,00003 | 19,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69086 | 18,8 |
| 12 | 11 | 2 | 36,69756 | 16,7 |
| 1 | 13 | 12 | 38,12441 | 16,7 |
| 12 | 13 | 2 | 48,78056 | 13,6 |
| 13 | 2 | 11 | 36,03735 | 13,6 |
| 11 | 2 | 1 | 30,35975 | 17,3 |
| 2 | 12 | 13 | 51,25790 | 13,3 |
| 11 | 12 | 1 | 25,40201 | 16,7 |
| 12 | 1 | 2 | 41,65472 | 13,6 |
| 2 | 1 | 13 | 46,69861 | 15,1 |

Zestaw 2

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1924,756 | 1623,443 |
| 2 | 3152,777 | 1610,150 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,416 | 0,066 |
| 2 | 11 | 1481,998 | 0,075 |
| 11 | 13 | 894,796 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 18,5 |
| 11 | 12 | 24,69074 | 18,2 |
| 11 | 2 | 61,38824 | 17,6 |
| 11 | 13 | 94,97009 | 19,1 |
| 11 | 1 | 0,00012 | 18,5 |
| 12 | 2 | 0,00000 | 16,0 |
| 12 | 13 | 51,25784 | 16,4 |
| 12 | 11 | 99,37827 | 15,7 |
| 12 | 1 | 124,78049 | 16,0 |
| 12 | 2 | 0,00019 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69083 | 19,4 |
| 12 | 11 | 2 | 36,69753 | 13,9 |
| 1 | 13 | 12 | 38,12392 | 12,3 |
| 12 | 13 | 2 | 48,78040 | 15,4 |
| 11 | 2 | 1 | 30,35978 | 13,3 |
| 1 | 2 | 12 | 33,56460 | 15,7 |
| 2 | 12 | 13 | 51,25827 | 18,5 |
| 11 | 12 | 1 | 25,40213 | 14,8 |
| 12 | 1 | 2 | 41,65519 | 18,8 |
| 2 | 1 | 13 | 46,69870 | 13,3 |

Zestaw 3

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2925,354 | 1994,939 |
| 2 | 1698,545 | 2051,082 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,420 | 0,064 |
| 12 | 13 | 1164,912 | 0,064 |
| 2 | 11 | 1481,998 | 0,067 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47620 | 16,0 |
| 13 | 12 | 81,60019 | 14,5 |
| 13 | 2 | 130,38062 | 17,3 |
| 13 | 11 | 399,99975 | 16,4 |
| 11 | 1 | 0,00000 | 13,6 |
| 11 | 12 | 24,69071 | 19,1 |
| 11 | 2 | 61,38827 | 17,0 |
| 11 | 13 | 94,97019 | 16,7 |
| 11 | 1 | 0,00025 | 13,6 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 18,8 |
| 2 | 11 | 13 | 33,58191 | 16,0 |
| 1 | 13 | 12 | 38,12441 | 15,4 |
| 12 | 13 | 2 | 48,78052 | 11,7 |
| 11 | 2 | 1 | 30,35969 | 11,7 |
| 1 | 2 | 12 | 33,56454 | 18,8 |
| 13 | 12 | 11 | 48,12012 | 13,0 |
| 11 | 12 | 1 | 25,40164 | 17,6 |
| 12 | 1 | 2 | 41,65515 | 18,8 |
| 13 | 1 | 11 | 61,55352 | 17,3 |

Zestaw 4

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2808,138 | 1449,629 |
| 2 | 2301,201 | 2568,212 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 1 | 12 | 667,796 | 0,034 |
| 2 | 13 | 839,838 | 0,045 |
| 11 | 13 | 894,794 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,6 |
| 12 | 13 | 51,25836 | 14,5 |
| 12 | 11 | 99,37815 | 13,6 |
| 12 | 1 | 124,78049 | 17,0 |
| 12 | 2 | 399,99981 | 17,6 |
| 11 | 1 | 0,00000 | 14,2 |
| 11 | 12 | 24,69105 | 18,8 |
| 11 | 2 | 61,38852 | 16,7 |
| 11 | 13 | 94,97015 | 13,6 |
| 11 | 1 | 399,99981 | 14,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69744 | 14,2 |
| 2 | 11 | 13 | 33,58201 | 13,9 |
| 11 | 13 | 1 | 43,47580 | 15,1 |
| 1 | 13 | 12 | 38,12423 | 12,3 |
| 13 | 2 | 11 | 36,03704 | 13,3 |
| 1 | 2 | 12 | 33,56472 | 17,6 |
| 2 | 12 | 13 | 51,25836 | 17,3 |
| 13 | 12 | 11 | 48,12025 | 14,2 |
| 2 | 1 | 13 | 46,69846 | 15,7 |
| 13 | 1 | 11 | 61,55324 | 17,3 |

Zestaw 5

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2784,933 | 1426,731 |
| 2 | 2347,230 | 2574,176 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,702 | 0,047 |
| 12 | 13 | 1164,927 | 0,065 |
| 12 | 2 | 807,796 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,0 |
| 13 | 1 | 43,47580 | 16,7 |
| 13 | 12 | 81,60049 | 13,9 |
| 13 | 2 | 130,38086 | 17,6 |
| 13 | 11 | 399,99969 | 17,0 |
| 12 | 2 | 0,00000 | 18,8 |
| 12 | 13 | 51,25818 | 14,5 |
| 12 | 11 | 99,37849 | 17,0 |
| 12 | 1 | 124,78043 | 16,0 |
| 12 | 2 | 0,00003 | 18,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69099 | 18,5 |
| 12 | 11 | 2 | 36,69722 | 13,9 |
| 11 | 13 | 1 | 43,47614 | 11,7 |
| 1 | 13 | 12 | 38,12420 | 15,4 |
| 13 | 2 | 11 | 36,03738 | 12,3 |
| 1 | 2 | 12 | 33,56444 | 15,7 |
| 2 | 12 | 13 | 51,25799 | 18,8 |
| 13 | 12 | 11 | 48,12031 | 12,7 |
| 12 | 1 | 2 | 41,65491 | 14,5 |
| 13 | 1 | 11 | 61,55333 | 18,8 |

Zestaw 6

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1913,810 | 1654,151 |
| 2 | 3138,729 | 1565,913 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,411 | 0,067 |
| 12 | 13 | 1164,914 | 0,067 |
| 12 | 2 | 807,791 | 0,037 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25784 | 17,6 |
| 12 | 11 | 99,37849 | 13,6 |
| 12 | 1 | 124,78037 | 17,0 |
| 12 | 2 | 0,00003 | 17,3 |
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69114 | 17,3 |
| 11 | 2 | 61,38836 | 15,1 |
| 11 | 13 | 94,97052 | 18,8 |
| 11 | 1 | 0,00019 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69086 | 16,4 |
| 2 | 11 | 13 | 33,58225 | 18,2 |
| 11 | 13 | 1 | 43,47633 | 10,8 |
| 12 | 13 | 2 | 48,78025 | 12,7 |
| 11 | 2 | 1 | 30,35920 | 14,2 |
| 1 | 2 | 12 | 33,56466 | 14,8 |
| 2 | 12 | 13 | 51,25824 | 19,1 |
| 11 | 12 | 1 | 25,40194 | 17,3 |
| 2 | 1 | 13 | 46,69840 | 13,3 |
| 13 | 1 | 11 | 61,55373 | 16,0 |

Zestaw 7

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2594,427 | 1312,857 |
| 2 | 2661,274 | 2539,130 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,807 | 0,040 |
| 2 | 11 | 1482,005 | 0,071 |
| 11 | 13 | 894,796 | 0,050 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69111 | 19,1 |
| 11 | 2 | 61,38806 | 14,5 |
| 11 | 13 | 94,97049 | 13,6 |
| 11 | 1 | 399,99972 | 16,0 |
| 13 | 11 | 0,00000 | 16,0 |
| 13 | 1 | 43,47633 | 13,6 |
| 13 | 12 | 81,60000 | 16,7 |
| 13 | 2 | 130,38077 | 16,0 |
| 13 | 11 | 0,00022 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 14,5 |
| 2 | 11 | 13 | 33,58201 | 17,0 |
| 1 | 13 | 12 | 38,12448 | 13,9 |
| 12 | 13 | 2 | 48,78046 | 15,4 |
| 13 | 2 | 11 | 36,03722 | 13,9 |
| 1 | 2 | 12 | 33,56457 | 13,9 |
| 2 | 12 | 13 | 51,25824 | 14,5 |
| 13 | 12 | 11 | 48,12043 | 14,2 |
| 2 | 1 | 13 | 46,69892 | 13,6 |
| 13 | 1 | 11 | 61,55343 | 19,4 |

Zestaw 8

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2850,142 | 1499,455 |
| 2 | 2210,663 | 2547,921 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,697 | 0,045 |
| 12 | 13 | 1164,929 | 0,061 |
| 2 | 11 | 1481,999 | 0,073 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69090 | 15,7 |
| 11 | 2 | 61,38812 | 13,0 |
| 11 | 13 | 94,97028 | 14,5 |
| 11 | 1 | 399,99994 | 17,9 |
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47599 | 15,7 |
| 13 | 12 | 81,60056 | 16,7 |
| 13 | 2 | 130,38052 | 17,6 |
| 13 | 11 | 0,00012 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 16,4 |
| 2 | 11 | 13 | 33,58207 | 15,7 |
| 1 | 13 | 12 | 38,12448 | 12,0 |
| 12 | 13 | 2 | 48,78025 | 16,4 |
| 13 | 2 | 11 | 36,03731 | 15,7 |
| 11 | 2 | 1 | 30,35948 | 14,2 |
| 13 | 12 | 11 | 48,12019 | 17,3 |
| 11 | 12 | 1 | 25,40182 | 16,4 |
| 12 | 1 | 2 | 41,65469 | 17,0 |
| 2 | 1 | 13 | 46,69846 | 13,6 |

Zestaw 9

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2212,134 | 1327,085 |
| 2 | 3082,348 | 2193,654 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,699 | 0,046 |
| 12 | 11 | 1250,414 | 0,067 |
| 11 | 13 | 894,797 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25836 | 17,0 |
| 12 | 11 | 99,37843 | 15,7 |
| 12 | 1 | 124,78025 | 18,8 |
| 12 | 2 | 399,99975 | 17,3 |
| 11 | 1 | 0,00000 | 14,2 |
| 11 | 12 | 24,69086 | 18,5 |
| 11 | 2 | 61,38843 | 13,9 |
| 11 | 13 | 94,97025 | 14,2 |
| 11 | 1 | 399,99988 | 14,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 16,4 |
| 12 | 11 | 2 | 36,69741 | 16,7 |
| 1 | 13 | 12 | 38,12438 | 13,3 |
| 12 | 13 | 2 | 48,78062 | 11,4 |
| 13 | 2 | 11 | 36,03738 | 11,1 |
| 1 | 2 | 12 | 33,56488 | 14,8 |
| 2 | 12 | 13 | 51,25815 | 18,8 |
| 13 | 12 | 11 | 48,12034 | 12,7 |
| 12 | 1 | 2 | 41,65481 | 14,2 |
| 2 | 1 | 13 | 46,69836 | 14,8 |

Zestaw 10

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2677,571 | 2286,407 |
| 2 | 1728,307 | 1507,234 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,684 | 0,047 |
| 12 | 13 | 1164,913 | 0,063 |
| 2 | 13 | 839,842 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,6 |
| 12 | 13 | 51,25809 | 14,5 |
| 12 | 11 | 99,37840 | 14,8 |
| 12 | 1 | 124,78046 | 17,0 |
| 12 | 2 | 0,00025 | 17,6 |
| 11 | 1 | 0,00000 | 14,8 |
| 11 | 12 | 24,69080 | 19,4 |
| 11 | 2 | 61,38812 | 17,3 |
| 11 | 13 | 94,97046 | 17,9 |
| 11 | 1 | 399,99969 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69130 | 13,6 |
| 2 | 11 | 13 | 33,58204 | 13,3 |
| 11 | 13 | 1 | 43,47605 | 13,6 |
| 12 | 13 | 2 | 48,78028 | 11,4 |
| 13 | 2 | 11 | 36,03707 | 12,3 |
| 1 | 2 | 12 | 33,56451 | 15,7 |
| 13 | 12 | 11 | 48,12015 | 18,2 |
| 11 | 12 | 1 | 25,40185 | 15,7 |
| 12 | 1 | 2 | 41,65512 | 17,3 |
| 2 | 1 | 13 | 46,69889 | 16,7 |

Zestaw 11

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2001,967 | 2147,497 |
| 2 | 2613,781 | 1082,651 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,931 | 0,059 |
| 12 | 2 | 807,796 | 0,045 |
| 2 | 11 | 1481,995 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 16,4 |
| 12 | 13 | 51,25793 | 16,0 |
| 12 | 11 | 99,37827 | 15,1 |
| 12 | 1 | 124,78037 | 16,7 |
| 12 | 2 | 399,99994 | 16,4 |
| 11 | 1 | 0,00000 | 19,1 |
| 11 | 12 | 24,69071 | 16,7 |
| 11 | 2 | 61,38802 | 18,2 |
| 11 | 13 | 94,97028 | 17,3 |
| 11 | 1 | 399,99994 | 19,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69127 | 14,5 |
| 2 | 11 | 13 | 33,58198 | 13,6 |
| 1 | 13 | 12 | 38,12392 | 15,4 |
| 12 | 13 | 2 | 48,78022 | 13,3 |
| 13 | 2 | 11 | 36,03691 | 9,9 |
| 1 | 2 | 12 | 33,56460 | 19,1 |
| 2 | 12 | 13 | 51,25830 | 18,2 |
| 13 | 12 | 11 | 48,12049 | 17,3 |
| 2 | 1 | 13 | 46,69855 | 14,8 |
| 13 | 1 | 11 | 61,55364 | 17,3 |

Zestaw 12

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2176,441 | 2291,929 |
| 2 | 2291,583 | 1069,246 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,926 | 0,068 |
| 2 | 11 | 1481,995 | 0,074 |
| 11 | 13 | 894,797 | 0,051 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,2 |
| 12 | 13 | 51,25833 | 18,5 |
| 12 | 11 | 99,37843 | 16,0 |
| 12 | 1 | 124,78043 | 19,1 |
| 12 | 2 | 0,00003 | 18,2 |
| 11 | 1 | 0,00000 | 14,5 |
| 11 | 12 | 24,69120 | 19,4 |
| 11 | 2 | 61,38836 | 17,3 |
| 11 | 13 | 94,97059 | 14,8 |
| 11 | 1 | 399,99975 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69074 | 18,2 |
| 12 | 11 | 2 | 36,69725 | 14,8 |
| 11 | 13 | 1 | 43,47580 | 14,8 |
| 12 | 13 | 2 | 48,78068 | 15,7 |
| 11 | 2 | 1 | 30,35941 | 12,0 |
| 1 | 2 | 12 | 33,56469 | 17,6 |
| 2 | 12 | 13 | 51,25787 | 18,5 |
| 13 | 12 | 11 | 48,12028 | 16,0 |
| 12 | 1 | 2 | 41,65509 | 16,4 |
| 2 | 1 | 13 | 46,69877 | 14,5 |

Zestaw 13

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2240,410 | 2319,902 |
| 2 | 2194,975 | 1092,649 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,693 | 0,050 |
| 1 | 11 | 686,014 | 0,044 |
| 11 | 13 | 894,803 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 19,1 |
| 13 | 1 | 43,47596 | 18,8 |
| 13 | 12 | 81,60012 | 13,0 |
| 13 | 2 | 130,38068 | 17,0 |
| 13 | 11 | 0,00012 | 19,1 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25836 | 17,9 |
| 12 | 11 | 99,37852 | 14,5 |
| 12 | 1 | 124,78019 | 15,4 |
| 12 | 2 | 0,00015 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69074 | 16,0 |
| 2 | 11 | 13 | 33,58222 | 13,6 |
| 1 | 13 | 12 | 38,12401 | 17,9 |
| 12 | 13 | 2 | 48,78025 | 15,7 |
| 13 | 2 | 11 | 36,03710 | 13,0 |
| 1 | 2 | 12 | 33,56448 | 16,7 |
| 13 | 12 | 11 | 48,12059 | 16,7 |
| 11 | 12 | 1 | 25,40216 | 13,9 |
| 12 | 1 | 2 | 41,65512 | 17,6 |
| 13 | 1 | 11 | 61,55377 | 18,2 |

Zestaw 14

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2558,775 | 1302,047 |
| 2 | 2710,999 | 2520,669 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,805 | 0,033 |
| 1 | 13 | 1083,692 | 0,049 |
| 11 | 13 | 894,798 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,5 |
| 12 | 13 | 51,25840 | 13,9 |
| 12 | 11 | 99,37864 | 14,5 |
| 12 | 1 | 124,78009 | 13,9 |
| 12 | 2 | 399,99997 | 18,5 |
| 13 | 11 | 0,00000 | 14,5 |
| 13 | 1 | 43,47605 | 15,1 |
| 13 | 12 | 81,60034 | 16,4 |
| 13 | 2 | 130,38056 | 16,7 |
| 13 | 11 | 399,99994 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69123 | 16,4 |
| 2 | 11 | 13 | 33,58213 | 17,3 |
| 1 | 13 | 12 | 38,12429 | 13,9 |
| 12 | 13 | 2 | 48,78052 | 13,3 |
| 13 | 2 | 11 | 36,03741 | 13,3 |
| 11 | 2 | 1 | 30,35948 | 13,0 |
| 13 | 12 | 11 | 48,12006 | 12,7 |
| 11 | 12 | 1 | 25,40176 | 17,0 |
| 12 | 1 | 2 | 41,65478 | 14,2 |
| 13 | 1 | 11 | 61,55370 | 15,1 |

Zestaw 15

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2467,113 | 1286,101 |
| 2 | 2828,636 | 2459,776 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,808 | 0,041 |
| 1 | 13 | 1083,689 | 0,052 |
| 1 | 11 | 686,010 | 0,037 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25806 | 19,4 |
| 12 | 11 | 99,37870 | 13,6 |
| 12 | 1 | 124,78009 | 15,4 |
| 12 | 2 | 0,00015 | 14,8 |
| 11 | 1 | 0,00000 | 16,4 |
| 11 | 12 | 24,69083 | 15,7 |
| 11 | 2 | 61,38855 | 17,0 |
| 11 | 13 | 94,97043 | 14,8 |
| 11 | 1 | 0,00028 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69741 | 16,7 |
| 2 | 11 | 13 | 33,58219 | 17,9 |
| 1 | 13 | 12 | 38,12398 | 14,5 |
| 12 | 13 | 2 | 48,78019 | 17,0 |
| 13 | 2 | 11 | 36,03701 | 12,7 |
| 1 | 2 | 12 | 33,56469 | 15,1 |
| 2 | 12 | 13 | 51,25799 | 15,7 |
| 11 | 12 | 1 | 25,40194 | 19,4 |
| 12 | 1 | 2 | 41,65491 | 15,7 |
| 13 | 1 | 11 | 61,55361 | 15,4 |

Zestaw 16

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1982,630 | 2121,251 |
| 2 | 2658,310 | 1095,741 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 1 | 11 | 686,023 | 0,041 |
| 12 | 2 | 807,803 | 0,042 |
| 11 | 13 | 894,795 | 0,047 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,9 |
| 13 | 1 | 43,47623 | 15,4 |
| 13 | 12 | 81,60043 | 17,3 |
| 13 | 2 | 130,38074 | 13,3 |
| 13 | 11 | 0,00019 | 17,9 |
| 11 | 1 | 0,00000 | 14,8 |
| 11 | 12 | 24,69105 | 13,6 |
| 11 | 2 | 61,38809 | 17,3 |
| 11 | 13 | 94,97052 | 13,6 |
| 11 | 1 | 0,00003 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69117 | 19,4 |
| 12 | 11 | 2 | 36,69753 | 12,7 |
| 11 | 13 | 1 | 43,47611 | 15,4 |
| 1 | 13 | 12 | 38,12432 | 15,4 |
| 13 | 2 | 11 | 36,03725 | 11,4 |
| 1 | 2 | 12 | 33,56478 | 13,3 |
| 13 | 12 | 11 | 48,12000 | 15,4 |
| 11 | 12 | 1 | 25,40160 | 17,0 |
| 12 | 1 | 2 | 41,65494 | 14,2 |
| 13 | 1 | 11 | 61,55349 | 17,9 |

Zestaw 17

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1968,520 | 1536,119 |
| 2 | 3178,401 | 1746,837 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,017 | 0,035 |
| 12 | 13 | 1164,920 | 0,067 |
| 2 | 13 | 839,839 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 13,6 |
| 11 | 12 | 24,69130 | 18,8 |
| 11 | 2 | 61,38836 | 14,8 |
| 11 | 13 | 94,97059 | 14,5 |
| 11 | 1 | 0,00015 | 13,6 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25784 | 19,4 |
| 12 | 11 | 99,37818 | 15,7 |
| 12 | 1 | 124,78019 | 14,8 |
| 12 | 2 | 399,99994 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69108 | 17,9 |
| 2 | 11 | 13 | 33,58198 | 17,3 |
| 1 | 13 | 12 | 38,12451 | 12,7 |
| 12 | 13 | 2 | 48,78052 | 12,3 |
| 11 | 2 | 1 | 30,35938 | 13,3 |
| 1 | 2 | 12 | 33,56469 | 17,0 |
| 13 | 12 | 11 | 48,12019 | 18,5 |
| 11 | 12 | 1 | 25,40179 | 17,6 |
| 12 | 1 | 2 | 41,65475 | 13,9 |
| 13 | 1 | 11 | 61,55333 | 18,8 |

Zestaw 18

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2926,880 | 1990,539 |
| 2 | 1700,607 | 2057,385 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,809 | 0,033 |
| 1 | 13 | 1083,692 | 0,052 |
| 2 | 11 | 1482,009 | 0,073 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25840 | 19,1 |
| 12 | 11 | 99,37855 | 18,2 |
| 12 | 1 | 124,78037 | 16,4 |
| 12 | 2 | 0,00022 | 16,7 |
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69105 | 17,0 |
| 11 | 2 | 61,38824 | 16,4 |
| 11 | 13 | 94,97037 | 14,8 |
| 11 | 1 | 399,99978 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 17,6 |
| 12 | 11 | 2 | 36,69719 | 14,5 |
| 11 | 13 | 1 | 43,47586 | 15,1 |
| 12 | 13 | 2 | 48,78031 | 16,7 |
| 11 | 2 | 1 | 30,35938 | 15,4 |
| 1 | 2 | 12 | 33,56463 | 13,3 |
| 2 | 12 | 13 | 51,25840 | 19,1 |
| 11 | 12 | 1 | 25,40204 | 15,7 |
| 12 | 1 | 2 | 41,65506 | 16,0 |
| 13 | 1 | 11 | 61,55336 | 15,7 |

Zestaw 19

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2709,627 | 2267,425 |
| 2 | 1708,324 | 1556,367 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,011 | 0,039 |
| 12 | 11 | 1250,401 | 0,066 |
| 2 | 11 | 1482,008 | 0,067 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,3 |
| 13 | 1 | 43,47620 | 13,6 |
| 13 | 12 | 81,60012 | 12,7 |
| 13 | 2 | 130,38074 | 15,4 |
| 13 | 11 | 0,00003 | 17,3 |
| 11 | 1 | 0,00000 | 14,8 |
| 11 | 12 | 24,69117 | 13,6 |
| 11 | 2 | 61,38836 | 16,4 |
| 11 | 13 | 94,97065 | 17,3 |
| 11 | 1 | 399,99981 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69731 | 14,5 |
| 2 | 11 | 13 | 33,58198 | 16,7 |
| 11 | 13 | 1 | 43,47627 | 13,9 |
| 12 | 13 | 2 | 48,78049 | 16,7 |
| 13 | 2 | 11 | 36,03744 | 11,4 |
| 1 | 2 | 12 | 33,56485 | 13,9 |
| 13 | 12 | 11 | 48,12034 | 13,9 |
| 11 | 12 | 1 | 25,40216 | 15,7 |
| 12 | 1 | 2 | 41,65478 | 15,4 |
| 2 | 1 | 13 | 46,69849 | 17,0 |

Zestaw 20

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2884,664 | 2083,738 |
| 2 | 1668,166 | 1915,373 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 2 | 807,786 | 0,037 |
| 2 | 11 | 1481,996 | 0,071 |
| 2 | 13 | 839,850 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47636 | 19,4 |
| 13 | 12 | 81,60022 | 12,3 |
| 13 | 2 | 130,38096 | 17,9 |
| 13 | 11 | 399,99969 | 15,4 |
| 12 | 2 | 0,00000 | 16,4 |
| 12 | 13 | 51,25787 | 16,0 |
| 12 | 11 | 99,37827 | 16,7 |
| 12 | 1 | 124,78028 | 15,1 |
| 12 | 2 | 0,00003 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69123 | 17,9 |
| 12 | 11 | 2 | 36,69704 | 16,4 |
| 1 | 13 | 12 | 38,12444 | 17,9 |
| 12 | 13 | 2 | 48,78046 | 17,3 |
| 13 | 2 | 11 | 36,03707 | 12,7 |
| 1 | 2 | 12 | 33,56500 | 18,2 |
| 2 | 12 | 13 | 51,25824 | 13,9 |
| 13 | 12 | 11 | 48,12037 | 14,2 |
| 2 | 1 | 13 | 46,69870 | 15,1 |
| 13 | 1 | 11 | 61,55346 | 16,4 |

Zestaw 21

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2399,754 | 2351,218 |
| 2 | 1987,380 | 1194,429 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,813 | 0,036 |
| 1 | 11 | 686,008 | 0,044 |
| 12 | 11 | 1250,414 | 0,065 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 18,5 |
| 11 | 12 | 24,69093 | 15,1 |
| 11 | 2 | 61,38858 | 13,0 |
| 11 | 13 | 94,97012 | 16,0 |
| 11 | 1 | 399,99978 | 18,5 |
| 12 | 2 | 0,00000 | 17,9 |
| 12 | 13 | 51,25836 | 14,8 |
| 12 | 11 | 99,37815 | 17,6 |
| 12 | 1 | 124,78049 | 16,0 |
| 12 | 2 | 399,99972 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69117 | 14,8 |
| 2 | 11 | 13 | 33,58204 | 19,1 |
| 11 | 13 | 1 | 43,47623 | 10,2 |
| 12 | 13 | 2 | 48,78025 | 17,0 |
| 13 | 2 | 11 | 36,03707 | 11,7 |
| 1 | 2 | 12 | 33,56472 | 13,3 |
| 2 | 12 | 13 | 51,25806 | 17,3 |
| 13 | 12 | 11 | 48,12052 | 16,0 |
| 12 | 1 | 2 | 41,65519 | 19,1 |
| 2 | 1 | 13 | 46,69886 | 17,6 |

Zestaw 22

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2624,939 | 1324,337 |
| 2 | 2616,798 | 2552,403 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,813 | 0,035 |
| 12 | 13 | 1164,917 | 0,068 |
| 2 | 13 | 839,844 | 0,039 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 16,0 |
| 12 | 13 | 51,25833 | 18,8 |
| 12 | 11 | 99,37849 | 18,2 |
| 12 | 1 | 124,78015 | 16,7 |
| 12 | 2 | 0,00015 | 16,0 |
| 13 | 11 | 0,00000 | 17,3 |
| 13 | 1 | 43,47586 | 19,1 |
| 13 | 12 | 81,60052 | 16,7 |
| 13 | 2 | 130,38093 | 17,9 |
| 13 | 11 | 0,00022 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69120 | 16,7 |
| 12 | 11 | 2 | 36,69756 | 16,7 |
| 11 | 13 | 1 | 43,47636 | 14,2 |
| 1 | 13 | 12 | 38,12420 | 13,6 |
| 13 | 2 | 11 | 36,03710 | 12,0 |
| 1 | 2 | 12 | 33,56491 | 15,4 |
| 2 | 12 | 13 | 51,25836 | 14,5 |
| 11 | 12 | 1 | 25,40185 | 17,9 |
| 12 | 1 | 2 | 41,65463 | 13,6 |
| 13 | 1 | 11 | 61,55364 | 19,1 |

Zestaw 23

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2831,474 | 2160,073 |
| 2 | 1662,694 | 1783,023 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,797 | 0,035 |
| 1 | 13 | 1083,700 | 0,052 |
| 12 | 13 | 1164,918 | 0,064 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,4 |
| 11 | 12 | 24,69071 | 15,4 |
| 11 | 2 | 61,38852 | 15,7 |
| 11 | 13 | 94,97012 | 17,6 |
| 11 | 1 | 399,99975 | 16,4 |
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25843 | 14,2 |
| 12 | 11 | 99,37861 | 14,5 |
| 12 | 1 | 124,78062 | 14,2 |
| 12 | 2 | 0,00028 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69108 | 13,9 |
| 2 | 11 | 13 | 33,58210 | 14,8 |
| 11 | 13 | 1 | 43,47633 | 13,0 |
| 1 | 13 | 12 | 38,12401 | 17,9 |
| 13 | 2 | 11 | 36,03750 | 12,3 |
| 1 | 2 | 12 | 33,56500 | 14,2 |
| 2 | 12 | 13 | 51,25815 | 14,2 |
| 13 | 12 | 11 | 48,12052 | 13,9 |
| 2 | 1 | 13 | 46,69852 | 15,7 |
| 13 | 1 | 11 | 61,55380 | 14,5 |

Zestaw 24

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1888,065 | 1819,148 |
| 2 | 3025,765 | 1356,708 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 11 | 686,018 | 0,035 |
| 2 | 11 | 1481,998 | 0,074 |
| 2 | 13 | 839,847 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25802 | 17,6 |
| 12 | 11 | 99,37852 | 17,9 |
| 12 | 1 | 124,78037 | 16,4 |
| 12 | 2 | 399,99969 | 17,3 |
| 13 | 11 | 0,00000 | 13,6 |
| 13 | 1 | 43,47611 | 15,4 |
| 13 | 12 | 81,60025 | 18,2 |
| 13 | 2 | 130,38062 | 16,0 |
| 13 | 11 | 399,99991 | 13,6 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69753 | 13,9 |
| 2 | 11 | 13 | 33,58228 | 16,7 |
| 1 | 13 | 12 | 38,12423 | 13,0 |
| 12 | 13 | 2 | 48,78031 | 16,7 |
| 13 | 2 | 11 | 36,03707 | 11,7 |
| 1 | 2 | 12 | 33,56497 | 16,7 |
| 2 | 12 | 13 | 51,25824 | 14,5 |
| 13 | 12 | 11 | 48,12043 | 17,9 |
| 12 | 1 | 2 | 41,65503 | 14,8 |
| 2 | 1 | 13 | 46,69840 | 16,4 |

Zestaw 25

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2926,083 | 1642,996 |
| 2 | 2000,922 | 2450,640 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,813 | 0,036 |
| 12 | 11 | 1250,420 | 0,059 |
| 12 | 13 | 1164,915 | 0,067 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69096 | 13,9 |
| 11 | 2 | 61,38802 | 15,4 |
| 11 | 13 | 94,97009 | 17,0 |
| 11 | 1 | 399,99985 | 17,9 |
| 12 | 2 | 0,00000 | 14,5 |
| 12 | 13 | 51,25827 | 16,4 |
| 12 | 11 | 99,37827 | 14,8 |
| 12 | 1 | 124,78043 | 13,3 |
| 12 | 2 | 0,00003 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69117 | 18,5 |
| 12 | 11 | 2 | 36,69744 | 17,6 |
| 11 | 13 | 1 | 43,47617 | 13,3 |
| 1 | 13 | 12 | 38,12410 | 13,3 |
| 13 | 2 | 11 | 36,03747 | 14,5 |
| 11 | 2 | 1 | 30,35935 | 13,3 |
| 13 | 12 | 11 | 48,12056 | 13,0 |
| 11 | 12 | 1 | 25,40160 | 14,2 |
| 12 | 1 | 2 | 41,65506 | 17,0 |
| 13 | 1 | 11 | 61,55367 | 15,1 |

Zestaw 26

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2046,831 | 1438,086 |
| 2 | 3174,091 | 1925,423 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,014 | 0,038 |
| 12 | 11 | 1250,406 | 0,061 |
| 12 | 13 | 1164,924 | 0,066 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47636 | 16,4 |
| 13 | 12 | 81,60019 | 14,5 |
| 13 | 2 | 130,38099 | 18,5 |
| 13 | 11 | 399,99985 | 16,4 |
| 11 | 1 | 0,00000 | 18,2 |
| 11 | 12 | 24,69117 | 14,8 |
| 11 | 2 | 61,38830 | 16,4 |
| 11 | 13 | 94,97019 | 17,6 |
| 11 | 1 | 399,99994 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69071 | 14,5 |
| 2 | 11 | 13 | 33,58235 | 17,3 |
| 11 | 13 | 1 | 43,47611 | 12,3 |
| 1 | 13 | 12 | 38,12420 | 14,2 |
| 13 | 2 | 11 | 36,03713 | 12,3 |
| 1 | 2 | 12 | 33,56481 | 18,8 |
| 2 | 12 | 13 | 51,25793 | 16,7 |
| 13 | 12 | 11 | 48,12037 | 14,2 |
| 12 | 1 | 2 | 41,65488 | 18,2 |
| 2 | 1 | 13 | 46,69840 | 17,6 |

Zestaw 27

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2006,243 | 1482,977 |
| 2 | 3181,425 | 1839,572 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,808 | 0,033 |
| 1 | 11 | 686,025 | 0,044 |
| 12 | 13 | 1164,915 | 0,061 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,2 |
| 11 | 12 | 24,69111 | 17,0 |
| 11 | 2 | 61,38840 | 14,2 |
| 11 | 13 | 94,97034 | 15,4 |
| 11 | 1 | 0,00006 | 14,2 |
| 12 | 2 | 0,00000 | 14,5 |
| 12 | 13 | 51,25836 | 17,0 |
| 12 | 11 | 99,37818 | 14,8 |
| 12 | 1 | 124,78049 | 13,3 |
| 12 | 2 | 399,99994 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69719 | 18,2 |
| 2 | 11 | 13 | 33,58194 | 18,2 |
| 11 | 13 | 1 | 43,47596 | 16,0 |
| 12 | 13 | 2 | 48,78059 | 13,6 |
| 13 | 2 | 11 | 36,03722 | 11,1 |
| 1 | 2 | 12 | 33,56469 | 18,5 |
| 13 | 12 | 11 | 48,12012 | 12,7 |
| 11 | 12 | 1 | 25,40191 | 13,9 |
| 12 | 1 | 2 | 41,65488 | 15,7 |
| 2 | 1 | 13 | 46,69836 | 14,2 |

Zestaw 28

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1888,074 | 1814,490 |
| 2 | 3029,767 | 1361,996 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,796 | 0,039 |
| 1 | 11 | 686,018 | 0,040 |
| 12 | 13 | 1164,915 | 0,063 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47630 | 13,9 |
| 13 | 12 | 81,60037 | 15,1 |
| 13 | 2 | 130,38083 | 13,3 |
| 13 | 11 | 0,00003 | 16,4 |
| 12 | 2 | 0,00000 | 19,1 |
| 12 | 13 | 51,25787 | 14,8 |
| 12 | 11 | 99,37843 | 18,2 |
| 12 | 1 | 124,78031 | 16,4 |
| 12 | 2 | 0,00003 | 19,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69704 | 17,0 |
| 2 | 11 | 13 | 33,58207 | 15,4 |
| 11 | 13 | 1 | 43,47611 | 14,8 |
| 12 | 13 | 2 | 48,78037 | 15,4 |
| 13 | 2 | 11 | 36,03728 | 15,4 |
| 1 | 2 | 12 | 33,56500 | 17,6 |
| 13 | 12 | 11 | 48,12012 | 17,3 |
| 11 | 12 | 1 | 25,40167 | 14,2 |
| 12 | 1 | 2 | 41,65466 | 16,0 |
| 13 | 1 | 11 | 61,55343 | 18,8 |

Zestaw 29

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2828,473 | 2163,635 |
| 2 | 1663,028 | 1776,400 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,930 | 0,062 |
| 12 | 2 | 807,802 | 0,040 |
| 2 | 13 | 839,839 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,5 |
| 12 | 13 | 51,25821 | 18,2 |
| 12 | 11 | 99,37821 | 14,5 |
| 12 | 1 | 124,78062 | 18,5 |
| 12 | 2 | 0,00019 | 14,5 |
| 11 | 1 | 0,00000 | 19,1 |
| 11 | 12 | 24,69077 | 16,4 |
| 11 | 2 | 61,38843 | 13,3 |
| 11 | 13 | 94,97012 | 14,5 |
| 11 | 1 | 0,00006 | 19,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 17,6 |
| 12 | 11 | 2 | 36,69731 | 17,0 |
| 1 | 13 | 12 | 38,12448 | 13,0 |
| 12 | 13 | 2 | 48,78025 | 14,8 |
| 11 | 2 | 1 | 30,35954 | 13,6 |
| 1 | 2 | 12 | 33,56444 | 13,3 |
| 13 | 12 | 11 | 48,12056 | 16,4 |
| 11 | 12 | 1 | 25,40173 | 14,5 |
| 12 | 1 | 2 | 41,65488 | 18,5 |
| 13 | 1 | 11 | 61,55373 | 16,4 |

Zestaw 30

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2273,516 | 1305,190 |
| 2 | 3031,634 | 2271,352 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,011 | 0,036 |
| 12 | 13 | 1164,916 | 0,064 |
| 12 | 2 | 807,796 | 0,039 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 18,2 |
| 11 | 12 | 24,69127 | 16,0 |
| 11 | 2 | 61,38827 | 12,7 |
| 11 | 13 | 94,97056 | 17,3 |
| 11 | 1 | 399,99994 | 18,2 |
| 13 | 11 | 0,00000 | 17,9 |
| 13 | 1 | 43,47614 | 17,9 |
| 13 | 12 | 81,60009 | 16,0 |
| 13 | 2 | 130,38083 | 13,6 |
| 13 | 11 | 399,99972 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 17,0 |
| 2 | 11 | 13 | 33,58191 | 15,4 |
| 11 | 13 | 1 | 43,47593 | 10,8 |
| 1 | 13 | 12 | 38,12432 | 15,7 |
| 13 | 2 | 11 | 36,03719 | 13,9 |
| 1 | 2 | 12 | 33,56463 | 13,3 |
| 2 | 12 | 13 | 51,25830 | 14,5 |
| 11 | 12 | 1 | 25,40179 | 15,7 |
| 2 | 1 | 13 | 46,69892 | 15,4 |
| 13 | 1 | 11 | 61,55358 | 13,9 |

Zestaw 31

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2332,512 | 1291,698 |
| 2 | 2976,385 | 2337,471 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,026 | 0,042 |
| 12 | 11 | 1250,406 | 0,059 |
| 12 | 2 | 807,801 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,1 |
| 13 | 1 | 43,47620 | 14,2 |
| 13 | 12 | 81,60009 | 12,7 |
| 13 | 2 | 130,38080 | 13,6 |
| 13 | 11 | 0,00006 | 15,1 |
| 11 | 1 | 0,00000 | 15,4 |
| 11 | 12 | 24,69090 | 13,6 |
| 11 | 2 | 61,38824 | 12,7 |
| 11 | 13 | 94,97043 | 16,4 |
| 11 | 1 | 399,99978 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69707 | 14,2 |
| 2 | 11 | 13 | 33,58194 | 18,8 |
| 11 | 13 | 1 | 43,47614 | 11,1 |
| 12 | 13 | 2 | 48,78019 | 15,4 |
| 11 | 2 | 1 | 30,35932 | 14,5 |
| 1 | 2 | 12 | 33,56475 | 17,9 |
| 13 | 12 | 11 | 48,12028 | 16,0 |
| 11 | 12 | 1 | 25,40167 | 15,4 |
| 12 | 1 | 2 | 41,65497 | 17,0 |
| 13 | 1 | 11 | 61,55383 | 19,4 |

Zestaw 32

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2622,893 | 2312,348 |
| 2 | 1767,936 | 1430,724 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,415 | 0,058 |
| 12 | 2 | 807,786 | 0,037 |
| 2 | 11 | 1482,009 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,3 |
| 13 | 1 | 43,47596 | 15,1 |
| 13 | 12 | 81,60046 | 12,3 |
| 13 | 2 | 130,38090 | 17,6 |
| 13 | 11 | 0,00019 | 17,3 |
| 11 | 1 | 0,00000 | 16,7 |
| 11 | 12 | 24,69077 | 15,1 |
| 11 | 2 | 61,38830 | 18,2 |
| 11 | 13 | 94,97043 | 18,2 |
| 11 | 1 | 399,99988 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69704 | 16,7 |
| 2 | 11 | 13 | 33,58204 | 13,3 |
| 1 | 13 | 12 | 38,12410 | 15,4 |
| 12 | 13 | 2 | 48,78022 | 14,2 |
| 13 | 2 | 11 | 36,03701 | 14,2 |
| 1 | 2 | 12 | 33,56466 | 14,2 |
| 2 | 12 | 13 | 51,25784 | 16,4 |
| 11 | 12 | 1 | 25,40188 | 16,7 |
| 12 | 1 | 2 | 41,65478 | 13,3 |
| 13 | 1 | 11 | 61,55327 | 17,0 |

Zestaw 33

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1897,226 | 1916,395 |
| 2 | 2931,602 | 1254,370 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,405 | 0,061 |
| 2 | 11 | 1481,998 | 0,069 |
| 11 | 13 | 894,794 | 0,047 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69077 | 18,8 |
| 11 | 2 | 61,38824 | 15,4 |
| 11 | 13 | 94,97015 | 18,5 |
| 11 | 1 | 399,99985 | 16,0 |
| 12 | 2 | 0,00000 | 18,2 |
| 12 | 13 | 51,25840 | 16,4 |
| 12 | 11 | 99,37849 | 16,4 |
| 12 | 1 | 124,78059 | 19,1 |
| 12 | 2 | 399,99985 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69071 | 16,4 |
| 12 | 11 | 2 | 36,69704 | 13,6 |
| 11 | 13 | 1 | 43,47602 | 15,7 |
| 1 | 13 | 12 | 38,12420 | 15,7 |
| 13 | 2 | 11 | 36,03713 | 10,8 |
| 11 | 2 | 1 | 30,35932 | 12,0 |
| 2 | 12 | 13 | 51,25812 | 15,7 |
| 13 | 12 | 11 | 48,12037 | 18,5 |
| 12 | 1 | 2 | 41,65515 | 17,0 |
| 2 | 1 | 13 | 46,69877 | 16,0 |

Zestaw 34

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2207,859 | 1328,933 |
| 2 | 3085,601 | 2187,875 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,413 | 0,061 |
| 12 | 13 | 1164,929 | 0,065 |
| 11 | 13 | 894,804 | 0,049 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,6 |
| 11 | 12 | 24,69077 | 17,0 |
| 11 | 2 | 61,38809 | 17,9 |
| 11 | 13 | 94,97025 | 14,8 |
| 11 | 1 | 399,99972 | 17,6 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25833 | 17,3 |
| 12 | 11 | 99,37818 | 17,9 |
| 12 | 1 | 124,78037 | 16,4 |
| 12 | 2 | 0,00019 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 14,8 |
| 2 | 11 | 13 | 33,58204 | 14,5 |
| 11 | 13 | 1 | 43,47623 | 12,3 |
| 1 | 13 | 12 | 38,12448 | 17,9 |
| 13 | 2 | 11 | 36,03722 | 14,5 |
| 1 | 2 | 12 | 33,56497 | 16,0 |
| 2 | 12 | 13 | 51,25787 | 16,0 |
| 13 | 12 | 11 | 48,12040 | 16,7 |
| 12 | 1 | 2 | 41,65488 | 13,3 |
| 13 | 1 | 11 | 61,55352 | 18,2 |

Zestaw 35

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2953,221 | 1867,864 |
| 2 | 1776,435 | 2219,131 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 13 | 1083,695 | 0,045 |
| 1 | 11 | 686,017 | 0,036 |
| 2 | 13 | 839,837 | 0,041 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,1 |
| 13 | 1 | 43,47583 | 17,9 |
| 13 | 12 | 81,60003 | 14,8 |
| 13 | 2 | 130,38083 | 14,5 |
| 13 | 11 | 399,99978 | 15,1 |
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69080 | 17,9 |
| 11 | 2 | 61,38836 | 15,4 |
| 11 | 13 | 94,97034 | 13,6 |
| 11 | 1 | 399,99972 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69093 | 17,3 |
| 12 | 11 | 2 | 36,69701 | 17,9 |
| 11 | 13 | 1 | 43,47593 | 15,4 |
| 1 | 13 | 12 | 38,12414 | 13,3 |
| 13 | 2 | 11 | 36,03701 | 12,7 |
| 11 | 2 | 1 | 30,35975 | 15,4 |
| 2 | 12 | 13 | 51,25787 | 16,7 |
| 11 | 12 | 1 | 25,40207 | 15,1 |
| 12 | 1 | 2 | 41,65494 | 17,6 |
| 2 | 1 | 13 | 46,69880 | 15,7 |

Zestaw 36

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2809,822 | 2184,444 |
| 2 | 1666,241 | 1736,745 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,696 | 0,046 |
| 1 | 11 | 686,020 | 0,035 |
| 11 | 13 | 894,809 | 0,049 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 18,2 |
| 13 | 1 | 43,47611 | 17,9 |
| 13 | 12 | 81,60019 | 14,5 |
| 13 | 2 | 130,38062 | 14,8 |
| 13 | 11 | 399,99991 | 18,2 |
| 11 | 1 | 0,00000 | 16,7 |
| 11 | 12 | 24,69077 | 17,0 |
| 11 | 2 | 61,38818 | 17,3 |
| 11 | 13 | 94,97019 | 13,9 |
| 11 | 1 | 399,99991 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69725 | 14,5 |
| 2 | 11 | 13 | 33,58219 | 17,3 |
| 11 | 13 | 1 | 43,47611 | 10,8 |
| 1 | 13 | 12 | 38,12392 | 17,6 |
| 13 | 2 | 11 | 36,03728 | 11,4 |
| 11 | 2 | 1 | 30,35923 | 13,6 |
| 13 | 12 | 11 | 48,12003 | 12,7 |
| 11 | 12 | 1 | 25,40198 | 14,5 |
| 12 | 1 | 2 | 41,65488 | 16,7 |
| 13 | 1 | 11 | 61,55370 | 17,3 |

Zestaw 37

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2397,309 | 1284,738 |
| 2 | 2908,934 | 2401,184 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,916 | 0,067 |
| 2 | 11 | 1482,010 | 0,073 |
| 2 | 13 | 839,843 | 0,036 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47623 | 17,0 |
| 13 | 12 | 81,60034 | 13,9 |
| 13 | 2 | 130,38068 | 13,6 |
| 13 | 11 | 0,00012 | 15,4 |
| 12 | 2 | 0,00000 | 17,9 |
| 12 | 13 | 51,25840 | 16,7 |
| 12 | 11 | 99,37870 | 14,2 |
| 12 | 1 | 124,78012 | 17,0 |
| 12 | 2 | 0,00003 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69716 | 13,3 |
| 2 | 11 | 13 | 33,58198 | 16,7 |
| 1 | 13 | 12 | 38,12435 | 13,3 |
| 12 | 13 | 2 | 48,78028 | 12,3 |
| 13 | 2 | 11 | 36,03719 | 13,0 |
| 1 | 2 | 12 | 33,56500 | 15,1 |
| 2 | 12 | 13 | 51,25809 | 13,6 |
| 11 | 12 | 1 | 25,40167 | 15,1 |
| 2 | 1 | 13 | 46,69870 | 17,3 |
| 13 | 1 | 11 | 61,55327 | 19,4 |

Zestaw 38

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2126,197 | 1373,515 |
| 2 | 3139,758 | 2066,989 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,702 | 0,054 |
| 2 | 11 | 1482,013 | 0,066 |
| 11 | 13 | 894,807 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 19,4 |
| 13 | 1 | 43,47611 | 13,9 |
| 13 | 12 | 81,60052 | 17,3 |
| 13 | 2 | 130,38046 | 15,1 |
| 13 | 11 | 0,00028 | 19,4 |
| 12 | 2 | 0,00000 | 14,5 |
| 12 | 13 | 51,25793 | 14,2 |
| 12 | 11 | 99,37821 | 16,4 |
| 12 | 1 | 124,78049 | 14,8 |
| 12 | 2 | 399,99997 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 16,0 |
| 12 | 11 | 2 | 36,69710 | 17,6 |
| 11 | 13 | 1 | 43,47617 | 10,2 |
| 12 | 13 | 2 | 48,78034 | 12,3 |
| 13 | 2 | 11 | 36,03694 | 13,6 |
| 11 | 2 | 1 | 30,35932 | 12,0 |
| 2 | 12 | 13 | 51,25793 | 15,7 |
| 11 | 12 | 1 | 25,40164 | 17,9 |
| 12 | 1 | 2 | 41,65509 | 16,0 |
| 13 | 1 | 11 | 61,55358 | 16,4 |

Zestaw 39

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2829,901 | 1473,900 |
| 2 | 2255,622 | 2559,449 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,022 | 0,041 |
| 12 | 11 | 1250,415 | 0,065 |
| 12 | 13 | 1164,921 | 0,065 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25830 | 18,8 |
| 12 | 11 | 99,37815 | 16,4 |
| 12 | 1 | 124,78062 | 16,0 |
| 12 | 2 | 0,00015 | 17,3 |
| 11 | 1 | 0,00000 | 18,2 |
| 11 | 12 | 24,69077 | 18,2 |
| 11 | 2 | 61,38849 | 13,9 |
| 11 | 13 | 94,97056 | 17,9 |
| 11 | 1 | 399,99997 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69756 | 13,9 |
| 2 | 11 | 13 | 33,58228 | 16,0 |
| 11 | 13 | 1 | 43,47605 | 12,0 |
| 12 | 13 | 2 | 48,78031 | 16,4 |
| 11 | 2 | 1 | 30,35975 | 11,7 |
| 1 | 2 | 12 | 33,56441 | 18,8 |
| 13 | 12 | 11 | 48,12040 | 13,9 |
| 11 | 12 | 1 | 25,40164 | 16,7 |
| 12 | 1 | 2 | 41,65503 | 16,0 |
| 2 | 1 | 13 | 46,69858 | 15,7 |

Zestaw 40

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1896,386 | 1911,814 |
| 2 | 2936,501 | 1258,840 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,814 | 0,039 |
| 2 | 11 | 1481,997 | 0,068 |
| 11 | 13 | 894,792 | 0,048 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,7 |
| 11 | 12 | 24,69096 | 17,9 |
| 11 | 2 | 61,38802 | 14,5 |
| 11 | 13 | 94,97012 | 15,4 |
| 11 | 1 | 399,99988 | 16,7 |
| 13 | 11 | 0,00000 | 15,7 |
| 13 | 1 | 43,47633 | 14,5 |
| 13 | 12 | 81,60056 | 13,6 |
| 13 | 2 | 130,38080 | 18,5 |
| 13 | 11 | 0,00009 | 15,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69083 | 13,6 |
| 12 | 11 | 2 | 36,69707 | 15,4 |
| 1 | 13 | 12 | 38,12392 | 13,0 |
| 12 | 13 | 2 | 48,78012 | 11,4 |
| 13 | 2 | 11 | 36,03744 | 14,8 |
| 1 | 2 | 12 | 33,56481 | 15,7 |
| 2 | 12 | 13 | 51,25833 | 18,8 |
| 11 | 12 | 1 | 25,40204 | 19,1 |
| 12 | 1 | 2 | 41,65503 | 13,6 |
| 2 | 1 | 13 | 46,69870 | 14,8 |

Zestaw 41

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2050,160 | 1434,828 |
| 2 | 3173,125 | 1931,984 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 1 | 12 | 667,802 | 0,034 |
| 12 | 2 | 807,790 | 0,037 |
| 2 | 13 | 839,841 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,3 |
| 11 | 12 | 24,69105 | 18,2 |
| 11 | 2 | 61,38840 | 17,6 |
| 11 | 13 | 94,97015 | 19,1 |
| 11 | 1 | 0,00006 | 17,3 |
| 12 | 2 | 0,00000 | 17,9 |
| 12 | 13 | 51,25818 | 19,1 |
| 12 | 11 | 99,37815 | 13,6 |
| 12 | 1 | 124,78031 | 16,0 |
| 12 | 2 | 399,99997 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69725 | 15,1 |
| 2 | 11 | 13 | 33,58207 | 17,6 |
| 1 | 13 | 12 | 38,12410 | 12,0 |
| 12 | 13 | 2 | 48,78012 | 14,8 |
| 11 | 2 | 1 | 30,35938 | 17,0 |
| 1 | 2 | 12 | 33,56485 | 19,1 |
| 2 | 12 | 13 | 51,25840 | 17,9 |
| 11 | 12 | 1 | 25,40182 | 16,4 |
| 12 | 1 | 2 | 41,65472 | 17,6 |
| 13 | 1 | 11 | 61,55330 | 13,9 |

Zestaw 42

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1923,078 | 1627,788 |
| 2 | 3150,936 | 1603,779 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,017 | 0,035 |
| 12 | 11 | 1250,407 | 0,066 |
| 2 | 11 | 1482,004 | 0,072 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,2 |
| 11 | 12 | 24,69086 | 18,2 |
| 11 | 2 | 61,38843 | 15,7 |
| 11 | 13 | 94,97009 | 16,7 |
| 11 | 1 | 0,00003 | 14,2 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25833 | 16,0 |
| 12 | 11 | 99,37858 | 17,3 |
| 12 | 1 | 124,78059 | 19,1 |
| 12 | 2 | 399,99975 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69114 | 16,0 |
| 12 | 11 | 2 | 36,69722 | 15,1 |
| 11 | 13 | 1 | 43,47580 | 11,7 |
| 1 | 13 | 12 | 38,12401 | 14,5 |
| 13 | 2 | 11 | 36,03719 | 13,0 |
| 1 | 2 | 12 | 33,56478 | 13,6 |
| 2 | 12 | 13 | 51,25827 | 17,9 |
| 11 | 12 | 1 | 25,40216 | 13,9 |
| 2 | 1 | 13 | 46,69861 | 17,0 |
| 13 | 1 | 11 | 61,55324 | 14,2 |

Zestaw 43

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2732,758 | 2251,746 |
| 2 | 1695,613 | 1594,067 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 2 | 807,799 | 0,036 |
| 2 | 11 | 1482,000 | 0,067 |
| 2 | 13 | 839,846 | 0,041 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,0 |
| 12 | 13 | 51,25784 | 16,7 |
| 12 | 11 | 99,37824 | 15,4 |
| 12 | 1 | 124,78046 | 16,4 |
| 12 | 2 | 399,99997 | 17,0 |
| 13 | 11 | 0,00000 | 19,4 |
| 13 | 1 | 43,47602 | 16,7 |
| 13 | 12 | 81,60052 | 17,0 |
| 13 | 2 | 130,38049 | 13,9 |
| 13 | 11 | 0,00003 | 19,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69719 | 17,9 |
| 2 | 11 | 13 | 33,58198 | 16,4 |
| 11 | 13 | 1 | 43,47617 | 10,2 |
| 1 | 13 | 12 | 38,12395 | 16,7 |
| 13 | 2 | 11 | 36,03691 | 13,0 |
| 1 | 2 | 12 | 33,56488 | 14,2 |
| 2 | 12 | 13 | 51,25806 | 13,3 |
| 11 | 12 | 1 | 25,40160 | 16,7 |
| 2 | 1 | 13 | 46,69858 | 13,0 |
| 13 | 1 | 11 | 61,55370 | 17,9 |

Zestaw 44

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2848,819 | 2138,164 |
| 2 | 1661,908 | 1822,800 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,810 | 0,037 |
| 1 | 13 | 1083,695 | 0,051 |
| 2 | 11 | 1482,011 | 0,070 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47586 | 17,3 |
| 13 | 12 | 81,60009 | 17,0 |
| 13 | 2 | 130,38083 | 14,8 |
| 13 | 11 | 399,99972 | 16,4 |
| 11 | 1 | 0,00000 | 17,3 |
| 11 | 12 | 24,69090 | 18,8 |
| 11 | 2 | 61,38852 | 15,7 |
| 11 | 13 | 94,97065 | 14,8 |
| 11 | 1 | 399,99985 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 15,1 |
| 12 | 11 | 2 | 36,69725 | 13,9 |
| 11 | 13 | 1 | 43,47620 | 14,8 |
| 12 | 13 | 2 | 48,78062 | 17,3 |
| 13 | 2 | 11 | 36,03710 | 11,7 |
| 1 | 2 | 12 | 33,56454 | 16,0 |
| 2 | 12 | 13 | 51,25809 | 17,3 |
| 13 | 12 | 11 | 48,12052 | 12,7 |
| 2 | 1 | 13 | 46,69852 | 14,2 |
| 13 | 1 | 11 | 61,55377 | 17,0 |

Zestaw 45

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2330,334 | 2343,776 |
| 2 | 2072,479 | 1143,058 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,684 | 0,052 |
| 12 | 11 | 1250,406 | 0,061 |
| 12 | 13 | 1164,914 | 0,065 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 19,1 |
| 13 | 1 | 43,47611 | 16,0 |
| 13 | 12 | 81,60059 | 14,8 |
| 13 | 2 | 130,38077 | 15,4 |
| 13 | 11 | 399,99991 | 19,1 |
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69120 | 18,5 |
| 11 | 2 | 61,38861 | 13,0 |
| 11 | 13 | 94,97037 | 15,4 |
| 11 | 1 | 399,99985 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69753 | 16,7 |
| 2 | 11 | 13 | 33,58201 | 14,5 |
| 11 | 13 | 1 | 43,47580 | 14,2 |
| 12 | 13 | 2 | 48,78049 | 11,7 |
| 13 | 2 | 11 | 36,03710 | 14,8 |
| 1 | 2 | 12 | 33,56457 | 15,4 |
| 2 | 12 | 13 | 51,25827 | 14,2 |
| 13 | 12 | 11 | 48,12046 | 13,9 |
| 12 | 1 | 2 | 41,65503 | 15,7 |
| 13 | 1 | 11 | 61,55364 | 15,1 |

Zestaw 46

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2401,962 | 1284,544 |
| 2 | 2903,826 | 2405,413 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 1 | 11 | 686,024 | 0,042 |
| 2 | 13 | 839,844 | 0,039 |
| 11 | 13 | 894,807 | 0,045 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,6 |
| 11 | 12 | 24,69080 | 14,5 |
| 11 | 2 | 61,38855 | 17,0 |
| 11 | 13 | 94,97046 | 15,4 |
| 11 | 1 | 0,00009 | 17,6 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25830 | 17,0 |
| 12 | 11 | 99,37861 | 16,7 |
| 12 | 1 | 124,78009 | 13,6 |
| 12 | 2 | 0,00022 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69090 | 15,1 |
| 2 | 11 | 13 | 33,58213 | 16,4 |
| 11 | 13 | 1 | 43,47611 | 12,3 |
| 12 | 13 | 2 | 48,78012 | 12,0 |
| 13 | 2 | 11 | 36,03713 | 12,3 |
| 1 | 2 | 12 | 33,56460 | 17,0 |
| 2 | 12 | 13 | 51,25812 | 17,9 |
| 13 | 12 | 11 | 48,12052 | 15,4 |
| 2 | 1 | 13 | 46,69889 | 13,0 |
| 13 | 1 | 11 | 61,55336 | 16,4 |

Zestaw 47

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1912,400 | 1658,590 |
| 2 | 3136,503 | 1559,667 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,017 | 0,042 |
| 12 | 13 | 1164,918 | 0,063 |
| 11 | 13 | 894,797 | 0,053 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,7 |
| 13 | 1 | 43,47596 | 19,4 |
| 13 | 12 | 81,60006 | 13,9 |
| 13 | 2 | 130,38046 | 16,4 |
| 13 | 11 | 0,00012 | 15,7 |
| 11 | 1 | 0,00000 | 14,5 |
| 11 | 12 | 24,69080 | 15,4 |
| 11 | 2 | 61,38818 | 13,9 |
| 11 | 13 | 94,97043 | 17,9 |
| 11 | 1 | 399,99997 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69102 | 16,0 |
| 12 | 11 | 2 | 36,69707 | 16,0 |
| 11 | 13 | 1 | 43,47633 | 11,1 |
| 1 | 13 | 12 | 38,12435 | 15,7 |
| 13 | 2 | 11 | 36,03722 | 15,4 |
| 1 | 2 | 12 | 33,56488 | 13,9 |
| 13 | 12 | 11 | 48,12037 | 13,6 |
| 11 | 12 | 1 | 25,40194 | 15,4 |
| 12 | 1 | 2 | 41,65478 | 17,3 |
| 13 | 1 | 11 | 61,55333 | 16,7 |

Zestaw 48

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1936,630 | 2040,379 |
| 2 | 2780,123 | 1147,780 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,692 | 0,045 |
| 12 | 2 | 807,786 | 0,039 |
| 11 | 13 | 894,798 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25830 | 17,6 |
| 12 | 11 | 99,37827 | 13,6 |
| 12 | 1 | 124,78028 | 16,4 |
| 12 | 2 | 0,00028 | 14,8 |
| 13 | 11 | 0,00000 | 14,8 |
| 13 | 1 | 43,47614 | 16,4 |
| 13 | 12 | 81,60028 | 13,6 |
| 13 | 2 | 130,38096 | 14,5 |
| 13 | 11 | 399,99981 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69108 | 14,8 |
| 2 | 11 | 13 | 33,58194 | 14,5 |
| 1 | 13 | 12 | 38,12404 | 12,7 |
| 12 | 13 | 2 | 48,78052 | 13,9 |
| 13 | 2 | 11 | 36,03750 | 13,0 |
| 11 | 2 | 1 | 30,35920 | 17,3 |
| 2 | 12 | 13 | 51,25818 | 18,8 |
| 13 | 12 | 11 | 48,12034 | 14,2 |
| 2 | 1 | 13 | 46,69849 | 14,2 |
| 13 | 1 | 11 | 61,55358 | 13,9 |

Zestaw 49

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2763,962 | 1408,263 |
| 2 | 2386,912 | 2577,043 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,689 | 0,054 |
| 12 | 11 | 1250,406 | 0,060 |
| 12 | 13 | 1164,928 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,5 |
| 13 | 1 | 43,47627 | 14,8 |
| 13 | 12 | 81,60034 | 15,1 |
| 13 | 2 | 130,38068 | 18,2 |
| 13 | 11 | 399,99972 | 14,5 |
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69108 | 18,5 |
| 11 | 2 | 61,38849 | 17,0 |
| 11 | 13 | 94,97009 | 13,6 |
| 11 | 1 | 0,00012 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69127 | 16,0 |
| 2 | 11 | 13 | 33,58185 | 18,8 |
| 1 | 13 | 12 | 38,12401 | 12,3 |
| 12 | 13 | 2 | 48,78052 | 14,5 |
| 11 | 2 | 1 | 30,35954 | 17,0 |
| 1 | 2 | 12 | 33,56463 | 14,5 |
| 2 | 12 | 13 | 51,25824 | 13,3 |
| 13 | 12 | 11 | 48,12040 | 18,5 |
| 12 | 1 | 2 | 41,65478 | 17,0 |
| 2 | 1 | 13 | 46,69849 | 14,2 |

Zestaw 50

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1937,556 | 1593,462 |
| 2 | 3164,098 | 1655,162 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,410 | 0,060 |
| 12 | 2 | 807,798 | 0,043 |
| 2 | 11 | 1482,001 | 0,075 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,0 |
| 13 | 1 | 43,47623 | 17,3 |
| 13 | 12 | 81,60046 | 17,3 |
| 13 | 2 | 130,38059 | 17,9 |
| 13 | 11 | 399,99988 | 17,0 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25796 | 17,3 |
| 12 | 11 | 99,37858 | 15,1 |
| 12 | 1 | 124,78040 | 16,7 |
| 12 | 2 | 399,99969 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69102 | 16,0 |
| 2 | 11 | 13 | 33,58188 | 17,0 |
| 11 | 13 | 1 | 43,47623 | 12,7 |
| 1 | 13 | 12 | 38,12432 | 17,9 |
| 13 | 2 | 11 | 36,03728 | 10,5 |
| 1 | 2 | 12 | 33,56463 | 13,9 |
| 2 | 12 | 13 | 51,25784 | 16,7 |
| 11 | 12 | 1 | 25,40160 | 15,7 |
| 12 | 1 | 2 | 41,65472 | 18,5 |
| 13 | 1 | 11 | 61,55324 | 14,2 |

Zestaw 51

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2783,310 | 2210,618 |
| 2 | 1673,744 | 1684,237 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,811 | 0,035 |
| 1 | 11 | 686,013 | 0,038 |
| 2 | 11 | 1481,996 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,5 |
| 11 | 12 | 24,69114 | 14,5 |
| 11 | 2 | 61,38849 | 17,3 |
| 11 | 13 | 94,97043 | 13,9 |
| 11 | 1 | 399,99985 | 14,5 |
| 13 | 11 | 0,00000 | 18,8 |
| 13 | 1 | 43,47602 | 18,8 |
| 13 | 12 | 81,60043 | 14,5 |
| 13 | 2 | 130,38068 | 14,8 |
| 13 | 11 | 399,99969 | 18,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69725 | 18,2 |
| 2 | 11 | 13 | 33,58235 | 18,2 |
| 11 | 13 | 1 | 43,47580 | 13,3 |
| 12 | 13 | 2 | 48,78034 | 13,0 |
| 13 | 2 | 11 | 36,03713 | 10,2 |
| 1 | 2 | 12 | 33,56448 | 13,3 |
| 2 | 12 | 13 | 51,25821 | 14,5 |
| 11 | 12 | 1 | 25,40179 | 14,5 |
| 12 | 1 | 2 | 41,65463 | 19,1 |
| 2 | 1 | 13 | 46,69877 | 13,0 |

Zestaw 52

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2494,884 | 1289,200 |
| 2 | 2794,486 | 2480,188 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,701 | 0,046 |
| 12 | 11 | 1250,408 | 0,062 |
| 12 | 13 | 1164,926 | 0,061 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 15,1 |
| 11 | 12 | 24,69123 | 14,2 |
| 11 | 2 | 61,38809 | 13,6 |
| 11 | 13 | 94,97031 | 14,5 |
| 11 | 1 | 0,00012 | 15,1 |
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47599 | 18,2 |
| 13 | 12 | 81,60022 | 17,9 |
| 13 | 2 | 130,38090 | 15,1 |
| 13 | 11 | 399,99972 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69071 | 17,6 |
| 2 | 11 | 13 | 33,58201 | 18,8 |
| 11 | 13 | 1 | 43,47586 | 12,0 |
| 1 | 13 | 12 | 38,12420 | 16,4 |
| 11 | 2 | 1 | 30,35963 | 13,6 |
| 1 | 2 | 12 | 33,56497 | 15,4 |
| 2 | 12 | 13 | 51,25830 | 17,9 |
| 11 | 12 | 1 | 25,40210 | 19,1 |
| 12 | 1 | 2 | 41,65519 | 15,1 |
| 13 | 1 | 11 | 61,55355 | 14,8 |

Zestaw 53

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1896,780 | 1721,860 |
| 2 | 3099,702 | 1474,493 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,803 | 0,036 |
| 12 | 13 | 1164,922 | 0,059 |
| 12 | 2 | 807,792 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,0 |
| 13 | 1 | 43,47583 | 14,5 |
| 13 | 12 | 81,60025 | 13,9 |
| 13 | 2 | 130,38074 | 14,5 |
| 13 | 11 | 0,00025 | 16,0 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25840 | 17,0 |
| 12 | 11 | 99,37849 | 14,8 |
| 12 | 1 | 124,78006 | 18,5 |
| 12 | 2 | 0,00012 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 19,4 |
| 2 | 11 | 13 | 33,58222 | 17,3 |
| 1 | 13 | 12 | 38,12420 | 12,0 |
| 12 | 13 | 2 | 48,78037 | 14,8 |
| 13 | 2 | 11 | 36,03707 | 14,8 |
| 11 | 2 | 1 | 30,35972 | 13,9 |
| 2 | 12 | 13 | 51,25790 | 15,1 |
| 11 | 12 | 1 | 25,40167 | 13,9 |
| 2 | 1 | 13 | 46,69836 | 13,3 |
| 13 | 1 | 11 | 61,55324 | 15,7 |

Zestaw 54

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2298,402 | 2337,210 |
| 2 | 2114,330 | 1122,990 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,700 | 0,051 |
| 12 | 2 | 807,795 | 0,036 |
| 2 | 13 | 839,841 | 0,039 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,6 |
| 13 | 1 | 43,47577 | 14,5 |
| 13 | 12 | 81,60037 | 16,0 |
| 13 | 2 | 130,38056 | 15,4 |
| 13 | 11 | 399,99985 | 17,6 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25806 | 14,5 |
| 12 | 11 | 99,37818 | 17,3 |
| 12 | 1 | 124,78037 | 17,9 |
| 12 | 2 | 399,99981 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 14,8 |
| 12 | 11 | 2 | 36,69704 | 17,0 |
| 11 | 13 | 1 | 43,47620 | 15,1 |
| 1 | 13 | 12 | 38,12410 | 12,7 |
| 11 | 2 | 1 | 30,35957 | 13,3 |
| 1 | 2 | 12 | 33,56463 | 18,8 |
| 2 | 12 | 13 | 51,25824 | 16,7 |
| 13 | 12 | 11 | 48,12000 | 17,6 |
| 12 | 1 | 2 | 41,65485 | 13,3 |
| 2 | 1 | 13 | 46,69840 | 13,6 |

Zestaw 55

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2620,624 | 1322,583 |
| 2 | 2623,200 | 2550,674 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 2 | 11 | 1482,008 | 0,071 |
| 2 | 13 | 839,835 | 0,044 |
| 11 | 13 | 894,806 | 0,046 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,5 |
| 11 | 12 | 24,69120 | 16,7 |
| 11 | 2 | 61,38809 | 17,0 |
| 11 | 13 | 94,97012 | 18,2 |
| 11 | 1 | 399,99969 | 14,5 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25812 | 19,4 |
| 12 | 11 | 99,37870 | 17,3 |
| 12 | 1 | 124,78015 | 16,7 |
| 12 | 2 | 399,99997 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69127 | 18,8 |
| 12 | 11 | 2 | 36,69747 | 15,7 |
| 1 | 13 | 12 | 38,12451 | 12,7 |
| 12 | 13 | 2 | 48,78028 | 17,3 |
| 11 | 2 | 1 | 30,35954 | 16,4 |
| 1 | 2 | 12 | 33,56457 | 18,5 |
| 13 | 12 | 11 | 48,12000 | 14,5 |
| 11 | 12 | 1 | 25,40157 | 19,4 |
| 12 | 1 | 2 | 41,65515 | 16,4 |
| 2 | 1 | 13 | 46,69892 | 13,3 |

Zestaw 56

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2460,266 | 2350,287 |
| 2 | 1919,591 | 1247,616 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,804 | 0,036 |
| 2 | 11 | 1482,011 | 0,071 |
| 2 | 13 | 839,850 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 19,4 |
| 13 | 1 | 43,47614 | 19,4 |
| 13 | 12 | 81,60003 | 17,9 |
| 13 | 2 | 130,38059 | 14,8 |
| 13 | 11 | 0,00012 | 19,4 |
| 12 | 2 | 0,00000 | 15,1 |
| 12 | 13 | 51,25812 | 15,7 |
| 12 | 11 | 99,37840 | 17,9 |
| 12 | 1 | 124,78062 | 13,3 |
| 12 | 2 | 0,00012 | 15,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69099 | 18,8 |
| 2 | 11 | 13 | 33,58198 | 18,5 |
| 1 | 13 | 12 | 38,12410 | 14,5 |
| 12 | 13 | 2 | 48,78009 | 13,3 |
| 13 | 2 | 11 | 36,03725 | 13,3 |
| 1 | 2 | 12 | 33,56475 | 18,5 |
| 2 | 12 | 13 | 51,25787 | 17,9 |
| 13 | 12 | 11 | 48,12025 | 14,5 |
| 2 | 1 | 13 | 46,69833 | 16,4 |
| 13 | 1 | 11 | 61,55346 | 13,6 |

Zestaw 57

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1922,294 | 2005,993 |
| 2 | 2825,997 | 1174,407 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,407 | 0,064 |
| 2 | 11 | 1482,005 | 0,071 |
| 11 | 13 | 894,790 | 0,048 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 19,4 |
| 12 | 13 | 51,25809 | 17,3 |
| 12 | 11 | 99,37843 | 14,8 |
| 12 | 1 | 124,78006 | 16,7 |
| 12 | 2 | 0,00003 | 19,4 |
| 11 | 1 | 0,00000 | 14,8 |
| 11 | 12 | 24,69077 | 13,6 |
| 11 | 2 | 61,38824 | 13,3 |
| 11 | 13 | 94,97028 | 16,0 |
| 11 | 1 | 399,99985 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69114 | 16,0 |
| 12 | 11 | 2 | 36,69701 | 13,9 |
| 1 | 13 | 12 | 38,12404 | 15,1 |
| 12 | 13 | 2 | 48,78015 | 15,4 |
| 11 | 2 | 1 | 30,35941 | 14,2 |
| 1 | 2 | 12 | 33,56481 | 18,8 |
| 13 | 12 | 11 | 48,12043 | 16,7 |
| 11 | 12 | 1 | 25,40210 | 17,0 |
| 12 | 1 | 2 | 41,65491 | 14,2 |
| 2 | 1 | 13 | 46,69886 | 16,4 |

Zestaw 58

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2556,637 | 2334,365 |
| 2 | 1824,070 | 1348,688 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,413 | 0,065 |
| 12 | 2 | 807,791 | 0,037 |
| 11 | 13 | 894,793 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,3 |
| 11 | 12 | 24,69083 | 13,6 |
| 11 | 2 | 61,38821 | 12,3 |
| 11 | 13 | 94,97019 | 14,8 |
| 11 | 1 | 399,99969 | 17,3 |
| 12 | 2 | 0,00000 | 15,1 |
| 12 | 13 | 51,25818 | 17,9 |
| 12 | 11 | 99,37818 | 16,7 |
| 12 | 1 | 124,78046 | 14,2 |
| 12 | 2 | 399,99981 | 15,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69707 | 15,7 |
| 2 | 11 | 13 | 33,58225 | 18,8 |
| 11 | 13 | 1 | 43,47605 | 13,9 |
| 1 | 13 | 12 | 38,12420 | 14,8 |
| 13 | 2 | 11 | 36,03691 | 15,7 |
| 1 | 2 | 12 | 33,56444 | 14,2 |
| 2 | 12 | 13 | 51,25809 | 15,4 |
| 13 | 12 | 11 | 48,12022 | 13,3 |
| 12 | 1 | 2 | 41,65485 | 13,6 |
| 13 | 1 | 11 | 61,55349 | 17,9 |

Zestaw 59

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2788,333 | 1429,915 |
| 2 | 2340,634 | 2573,496 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 1 | 12 | 667,797 | 0,036 |
| 1 | 11 | 686,019 | 0,035 |
| 12 | 2 | 807,793 | 0,038 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25812 | 13,9 |
| 12 | 11 | 99,37836 | 12,7 |
| 12 | 1 | 124,78025 | 19,1 |
| 12 | 2 | 0,00022 | 14,8 |
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47577 | 17,3 |
| 13 | 12 | 81,60000 | 13,9 |
| 13 | 2 | 130,38090 | 13,3 |
| 13 | 11 | 0,00015 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69725 | 14,5 |
| 2 | 11 | 13 | 33,58188 | 17,3 |
| 1 | 13 | 12 | 38,12417 | 17,6 |
| 12 | 13 | 2 | 48,78049 | 17,0 |
| 11 | 2 | 1 | 30,35938 | 16,4 |
| 1 | 2 | 12 | 33,56488 | 19,1 |
| 2 | 12 | 13 | 51,25824 | 14,2 |
| 13 | 12 | 11 | 48,12059 | 14,2 |
| 12 | 1 | 2 | 41,65506 | 15,1 |
| 2 | 1 | 13 | 46,69849 | 17,3 |

Zestaw 60

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2736,532 | 2249,016 |
| 2 | 1693,687 | 1600,412 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,025 | 0,042 |
| 12 | 11 | 1250,416 | 0,062 |
| 12 | 13 | 1164,931 | 0,067 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 13,6 |
| 13 | 1 | 43,47583 | 13,6 |
| 13 | 12 | 81,60037 | 14,2 |
| 13 | 2 | 130,38049 | 18,2 |
| 13 | 11 | 0,00009 | 13,6 |
| 12 | 2 | 0,00000 | 15,1 |
| 12 | 13 | 51,25843 | 18,5 |
| 12 | 11 | 99,37830 | 16,7 |
| 12 | 1 | 124,78022 | 17,0 |
| 12 | 2 | 399,99972 | 15,1 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 14,2 |
| 2 | 11 | 13 | 33,58219 | 16,7 |
| 11 | 13 | 1 | 43,47630 | 15,1 |
| 1 | 13 | 12 | 38,12395 | 13,9 |
| 13 | 2 | 11 | 36,03716 | 10,2 |
| 1 | 2 | 12 | 33,56475 | 17,3 |
| 2 | 12 | 13 | 51,25815 | 13,9 |
| 13 | 12 | 11 | 48,12046 | 13,6 |
| 12 | 1 | 2 | 41,65475 | 18,2 |
| 2 | 1 | 13 | 46,69873 | 15,4 |

Zestaw 61

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2003,336 | 1486,616 |
| 2 | 3181,585 | 1832,942 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,692 | 0,053 |
| 12 | 13 | 1164,930 | 0,061 |
| 2 | 11 | 1482,004 | 0,066 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47636 | 19,4 |
| 13 | 12 | 81,60056 | 12,7 |
| 13 | 2 | 130,38080 | 17,6 |
| 13 | 11 | 0,00019 | 15,4 |
| 12 | 2 | 0,00000 | 19,4 |
| 12 | 13 | 51,25833 | 19,4 |
| 12 | 11 | 99,37821 | 13,6 |
| 12 | 1 | 124,78043 | 15,1 |
| 12 | 2 | 399,99978 | 19,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69090 | 18,2 |
| 2 | 11 | 13 | 33,58182 | 18,8 |
| 11 | 13 | 1 | 43,47633 | 13,6 |
| 12 | 13 | 2 | 48,78052 | 15,4 |
| 13 | 2 | 11 | 36,03738 | 15,1 |
| 11 | 2 | 1 | 30,35920 | 14,5 |
| 2 | 12 | 13 | 51,25818 | 13,9 |
| 13 | 12 | 11 | 48,12043 | 18,5 |
| 2 | 1 | 13 | 46,69883 | 16,7 |
| 13 | 1 | 11 | 61,55361 | 17,3 |

Zestaw 62

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2913,609 | 2025,350 |
| 2 | 1685,660 | 2006,493 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,812 | 0,040 |
| 12 | 13 | 1164,917 | 0,059 |
| 2 | 13 | 839,847 | 0,040 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25824 | 14,2 |
| 12 | 11 | 99,37818 | 12,7 |
| 12 | 1 | 124,78028 | 13,9 |
| 12 | 2 | 399,99972 | 13,9 |
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47614 | 16,4 |
| 13 | 12 | 81,60006 | 16,7 |
| 13 | 2 | 130,38068 | 13,6 |
| 13 | 11 | 399,99981 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69114 | 19,1 |
| 2 | 11 | 13 | 33,58201 | 15,7 |
| 11 | 13 | 1 | 43,47630 | 10,2 |
| 12 | 13 | 2 | 48,78040 | 16,7 |
| 11 | 2 | 1 | 30,35969 | 11,7 |
| 1 | 2 | 12 | 33,56472 | 15,7 |
| 2 | 12 | 13 | 51,25824 | 15,4 |
| 13 | 12 | 11 | 48,12009 | 13,3 |
| 2 | 1 | 13 | 46,69892 | 13,9 |
| 13 | 1 | 11 | 61,55373 | 18,5 |

Zestaw 63

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1986,570 | 1508,971 |
| 2 | 3181,330 | 1793,158 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,688 | 0,049 |
| 12 | 11 | 1250,403 | 0,060 |
| 2 | 13 | 839,834 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 15,1 |
| 12 | 13 | 51,25836 | 19,1 |
| 12 | 11 | 99,37821 | 16,0 |
| 12 | 1 | 124,78037 | 13,3 |
| 12 | 2 | 399,99988 | 15,1 |
| 11 | 1 | 0,00000 | 13,9 |
| 11 | 12 | 24,69117 | 17,9 |
| 11 | 2 | 61,38809 | 13,9 |
| 11 | 13 | 94,97028 | 18,5 |
| 11 | 1 | 0,00003 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69728 | 16,0 |
| 2 | 11 | 13 | 33,58219 | 15,7 |
| 11 | 13 | 1 | 43,47583 | 14,2 |
| 12 | 13 | 2 | 48,78034 | 15,1 |
| 13 | 2 | 11 | 36,03722 | 13,9 |
| 1 | 2 | 12 | 33,56451 | 13,9 |
| 13 | 12 | 11 | 48,12043 | 17,9 |
| 11 | 12 | 1 | 25,40167 | 14,8 |
| 12 | 1 | 2 | 41,65475 | 14,2 |
| 2 | 1 | 13 | 46,69889 | 16,4 |

Zestaw 64

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1983,890 | 1512,781 |
| 2 | 3181,084 | 1786,531 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,407 | 0,062 |
| 12 | 13 | 1164,930 | 0,060 |
| 2 | 13 | 839,833 | 0,039 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,5 |
| 13 | 1 | 43,47586 | 15,4 |
| 13 | 12 | 81,60028 | 14,8 |
| 13 | 2 | 130,38090 | 19,1 |
| 13 | 11 | 0,00025 | 14,5 |
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25809 | 13,6 |
| 12 | 11 | 99,37855 | 12,3 |
| 12 | 1 | 124,78009 | 13,6 |
| 12 | 2 | 0,00012 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69756 | 12,3 |
| 2 | 11 | 13 | 33,58210 | 17,9 |
| 1 | 13 | 12 | 38,12426 | 13,3 |
| 12 | 13 | 2 | 48,78068 | 12,3 |
| 11 | 2 | 1 | 30,35966 | 13,6 |
| 1 | 2 | 12 | 33,56485 | 15,4 |
| 13 | 12 | 11 | 48,12022 | 13,6 |
| 11 | 12 | 1 | 25,40207 | 18,8 |
| 2 | 1 | 13 | 46,69852 | 17,0 |
| 13 | 1 | 11 | 61,55340 | 13,6 |

Zestaw 65

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2943,174 | 1932,254 |
| 2 | 1732,351 | 2137,488 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,691 | 0,050 |
| 1 | 11 | 686,019 | 0,038 |
| 12 | 2 | 807,800 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 15,1 |
| 12 | 13 | 51,25799 | 15,1 |
| 12 | 11 | 99,37855 | 13,9 |
| 12 | 1 | 124,78046 | 17,9 |
| 12 | 2 | 0,00006 | 15,1 |
| 11 | 1 | 0,00000 | 18,2 |
| 11 | 12 | 24,69111 | 17,9 |
| 11 | 2 | 61,38815 | 12,3 |
| 11 | 13 | 94,97068 | 19,1 |
| 11 | 1 | 399,99978 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69731 | 14,5 |
| 2 | 11 | 13 | 33,58207 | 15,4 |
| 1 | 13 | 12 | 38,12423 | 14,5 |
| 12 | 13 | 2 | 48,78040 | 11,4 |
| 13 | 2 | 11 | 36,03722 | 15,7 |
| 11 | 2 | 1 | 30,35932 | 16,7 |
| 13 | 12 | 11 | 48,12034 | 16,4 |
| 11 | 12 | 1 | 25,40176 | 15,7 |
| 12 | 1 | 2 | 41,65488 | 15,7 |
| 13 | 1 | 11 | 61,55364 | 17,6 |

Zestaw 66

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1888,860 | 1847,080 |
| 2 | 3000,799 | 1325,732 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,698 | 0,050 |
| 12 | 11 | 1250,404 | 0,061 |
| 12 | 2 | 807,794 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,6 |
| 12 | 13 | 51,25818 | 13,9 |
| 12 | 11 | 99,37827 | 16,0 |
| 12 | 1 | 124,78037 | 13,9 |
| 12 | 2 | 0,00025 | 17,6 |
| 13 | 11 | 0,00000 | 15,4 |
| 13 | 1 | 43,47623 | 16,7 |
| 13 | 12 | 81,60037 | 17,3 |
| 13 | 2 | 130,38049 | 15,4 |
| 13 | 11 | 399,99997 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69111 | 19,4 |
| 12 | 11 | 2 | 36,69741 | 17,0 |
| 11 | 13 | 1 | 43,47593 | 15,7 |
| 12 | 13 | 2 | 48,78040 | 13,9 |
| 13 | 2 | 11 | 36,03722 | 14,5 |
| 11 | 2 | 1 | 30,35941 | 13,3 |
| 2 | 12 | 13 | 51,25802 | 17,3 |
| 11 | 12 | 1 | 25,40164 | 14,8 |
| 12 | 1 | 2 | 41,65512 | 15,4 |
| 2 | 1 | 13 | 46,69877 | 18,5 |

Zestaw 67

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2095,917 | 1395,218 |
| 2 | 3155,383 | 2016,301 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,799 | 0,039 |
| 1 | 13 | 1083,696 | 0,049 |
| 1 | 11 | 686,012 | 0,040 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47593 | 19,4 |
| 13 | 12 | 81,60059 | 12,7 |
| 13 | 2 | 130,38086 | 17,6 |
| 13 | 11 | 399,99988 | 16,4 |
| 11 | 1 | 0,00000 | 15,4 |
| 11 | 12 | 24,69130 | 15,1 |
| 11 | 2 | 61,38809 | 17,9 |
| 11 | 13 | 94,97037 | 18,8 |
| 11 | 1 | 0,00028 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69093 | 13,9 |
| 2 | 11 | 13 | 33,58231 | 16,0 |
| 11 | 13 | 1 | 43,47599 | 12,7 |
| 1 | 13 | 12 | 38,12448 | 13,6 |
| 13 | 2 | 11 | 36,03750 | 15,7 |
| 11 | 2 | 1 | 30,35963 | 16,4 |
| 13 | 12 | 11 | 48,12015 | 13,9 |
| 11 | 12 | 1 | 25,40173 | 17,3 |
| 12 | 1 | 2 | 41,65506 | 18,8 |
| 2 | 1 | 13 | 46,69852 | 17,9 |

Zestaw 68

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1904,215 | 1948,237 |
| 2 | 2896,247 | 1224,299 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,800 | 0,041 |
| 1 | 13 | 1083,688 | 0,047 |
| 12 | 13 | 1164,919 | 0,061 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 19,4 |
| 13 | 1 | 43,47617 | 17,0 |
| 13 | 12 | 81,60000 | 16,4 |
| 13 | 2 | 130,38096 | 13,3 |
| 13 | 11 | 0,00015 | 19,4 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25793 | 15,7 |
| 12 | 11 | 99,37861 | 14,2 |
| 12 | 1 | 124,78006 | 17,0 |
| 12 | 2 | 399,99981 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69753 | 16,7 |
| 2 | 11 | 13 | 33,58235 | 19,1 |
| 1 | 13 | 12 | 38,12448 | 15,4 |
| 12 | 13 | 2 | 48,78019 | 15,1 |
| 13 | 2 | 11 | 36,03698 | 9,9 |
| 11 | 2 | 1 | 30,35963 | 12,7 |
| 2 | 12 | 13 | 51,25830 | 13,6 |
| 11 | 12 | 1 | 25,40176 | 13,6 |
| 12 | 1 | 2 | 41,65497 | 17,3 |
| 2 | 1 | 13 | 46,69840 | 16,7 |

Zestaw 69

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2915,400 | 2021,050 |
| 2 | 1687,334 | 2012,910 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,684 | 0,049 |
| 12 | 11 | 1250,418 | 0,061 |
| 2 | 11 | 1481,995 | 0,069 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,0 |
| 11 | 12 | 24,69114 | 19,4 |
| 11 | 2 | 61,38809 | 17,9 |
| 11 | 13 | 94,97043 | 16,0 |
| 11 | 1 | 399,99981 | 17,0 |
| 12 | 2 | 0,00000 | 16,4 |
| 12 | 13 | 51,25818 | 15,4 |
| 12 | 11 | 99,37861 | 15,7 |
| 12 | 1 | 124,78037 | 15,1 |
| 12 | 2 | 0,00003 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69707 | 14,8 |
| 2 | 11 | 13 | 33,58201 | 18,8 |
| 1 | 13 | 12 | 38,12398 | 13,9 |
| 12 | 13 | 2 | 48,78040 | 14,2 |
| 13 | 2 | 11 | 36,03741 | 15,1 |
| 11 | 2 | 1 | 30,35960 | 13,3 |
| 2 | 12 | 13 | 51,25836 | 17,9 |
| 13 | 12 | 11 | 48,12000 | 16,4 |
| 12 | 1 | 2 | 41,65472 | 13,3 |
| 13 | 1 | 11 | 61,55324 | 18,8 |

Zestaw 70

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2868,785 | 1526,198 |
| 2 | 2166,492 | 2533,669 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 2 | 11 | 1481,999 | 0,067 |
| 2 | 13 | 839,841 | 0,036 |
| 11 | 13 | 894,805 | 0,046 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,0 |
| 13 | 1 | 43,47611 | 18,2 |
| 13 | 12 | 81,60012 | 12,7 |
| 13 | 2 | 130,38086 | 17,6 |
| 13 | 11 | 0,00003 | 16,0 |
| 12 | 2 | 0,00000 | 16,4 |
| 12 | 13 | 51,25827 | 13,9 |
| 12 | 11 | 99,37858 | 17,3 |
| 12 | 1 | 124,78043 | 17,0 |
| 12 | 2 | 0,00022 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69130 | 18,2 |
| 2 | 11 | 13 | 33,58219 | 16,7 |
| 11 | 13 | 1 | 43,47633 | 14,5 |
| 1 | 13 | 12 | 38,12404 | 13,9 |
| 13 | 2 | 11 | 36,03704 | 12,0 |
| 11 | 2 | 1 | 30,35972 | 15,1 |
| 2 | 12 | 13 | 51,25793 | 18,2 |
| 11 | 12 | 1 | 25,40204 | 15,7 |
| 12 | 1 | 2 | 41,65488 | 14,2 |
| 13 | 1 | 11 | 61,55367 | 19,1 |

Zestaw 71

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1892,471 | 1749,469 |
| 2 | 3080,799 | 1439,485 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,690 | 0,051 |
| 12 | 11 | 1250,420 | 0,059 |
| 12 | 2 | 807,784 | 0,040 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,2 |
| 12 | 13 | 51,25790 | 14,2 |
| 12 | 11 | 99,37818 | 15,7 |
| 12 | 1 | 124,78056 | 13,9 |
| 12 | 2 | 399,99975 | 14,2 |
| 11 | 1 | 0,00000 | 17,0 |
| 11 | 12 | 24,69096 | 18,8 |
| 11 | 2 | 61,38855 | 13,6 |
| 11 | 13 | 94,97015 | 13,3 |
| 11 | 1 | 399,99978 | 17,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 15,4 |
| 2 | 11 | 13 | 33,58204 | 17,3 |
| 11 | 13 | 1 | 43,47602 | 11,7 |
| 12 | 13 | 2 | 48,78046 | 14,5 |
| 11 | 2 | 1 | 30,35935 | 14,2 |
| 1 | 2 | 12 | 33,56457 | 15,4 |
| 13 | 12 | 11 | 48,12046 | 18,5 |
| 11 | 12 | 1 | 25,40204 | 14,2 |
| 12 | 1 | 2 | 41,65512 | 15,1 |
| 13 | 1 | 11 | 61,55346 | 15,4 |

Zestaw 72

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2587,914 | 2325,171 |
| 2 | 1796,539 | 1386,055 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,699 | 0,053 |
| 12 | 11 | 1250,419 | 0,066 |
| 2 | 11 | 1482,003 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 13,9 |
| 11 | 12 | 24,69099 | 17,0 |
| 11 | 2 | 61,38843 | 16,4 |
| 11 | 13 | 94,97012 | 17,6 |
| 11 | 1 | 0,00003 | 13,9 |
| 13 | 11 | 0,00000 | 18,5 |
| 13 | 1 | 43,47611 | 19,1 |
| 13 | 12 | 81,60049 | 17,9 |
| 13 | 2 | 130,38080 | 15,4 |
| 13 | 11 | 0,00015 | 18,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 15,1 |
| 12 | 11 | 2 | 36,69722 | 16,7 |
| 11 | 13 | 1 | 43,47617 | 11,4 |
| 12 | 13 | 2 | 48,78031 | 13,0 |
| 13 | 2 | 11 | 36,03722 | 14,5 |
| 11 | 2 | 1 | 30,35929 | 12,7 |
| 13 | 12 | 11 | 48,12025 | 15,7 |
| 11 | 12 | 1 | 25,40167 | 17,6 |
| 12 | 1 | 2 | 41,65503 | 17,0 |
| 13 | 1 | 11 | 61,55333 | 15,4 |

Zestaw 73

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2048,577 | 2199,478 |
| 2 | 2516,166 | 1063,884 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,806 | 0,041 |
| 12 | 11 | 1250,420 | 0,061 |
| 12 | 13 | 1164,923 | 0,068 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,8 |
| 11 | 12 | 24,69077 | 16,7 |
| 11 | 2 | 61,38821 | 13,0 |
| 11 | 13 | 94,97009 | 13,6 |
| 11 | 1 | 399,99991 | 14,8 |
| 12 | 2 | 0,00000 | 15,4 |
| 12 | 13 | 51,25824 | 13,6 |
| 12 | 11 | 99,37821 | 12,3 |
| 12 | 1 | 124,78006 | 16,7 |
| 12 | 2 | 0,00003 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69117 | 17,0 |
| 12 | 11 | 2 | 36,69738 | 13,0 |
| 1 | 13 | 12 | 38,12410 | 12,3 |
| 12 | 13 | 2 | 48,78022 | 17,0 |
| 11 | 2 | 1 | 30,35969 | 17,0 |
| 1 | 2 | 12 | 33,56481 | 15,4 |
| 2 | 12 | 13 | 51,25790 | 19,1 |
| 11 | 12 | 1 | 25,40170 | 18,8 |
| 2 | 1 | 13 | 46,69886 | 13,0 |
| 13 | 1 | 11 | 61,55383 | 15,4 |

Zestaw 74

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1889,280 | 1781,913 |
| 2 | 3056,467 | 1399,961 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,402 | 0,059 |
| 12 | 2 | 807,800 | 0,043 |
| 11 | 13 | 894,800 | 0,052 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69120 | 15,1 |
| 11 | 2 | 61,38840 | 14,5 |
| 11 | 13 | 94,97043 | 18,2 |
| 11 | 1 | 399,99988 | 17,9 |
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25793 | 14,2 |
| 12 | 11 | 99,37861 | 15,7 |
| 12 | 1 | 124,78062 | 17,6 |
| 12 | 2 | 399,99994 | 14,8 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69123 | 17,9 |
| 2 | 11 | 13 | 33,58179 | 17,3 |
| 11 | 13 | 1 | 43,47605 | 14,2 |
| 1 | 13 | 12 | 38,12395 | 14,2 |
| 13 | 2 | 11 | 36,03731 | 12,3 |
| 1 | 2 | 12 | 33,56469 | 16,0 |
| 2 | 12 | 13 | 51,25809 | 16,4 |
| 11 | 12 | 1 | 25,40170 | 19,1 |
| 12 | 1 | 2 | 41,65469 | 18,2 |
| 2 | 1 | 13 | 46,69833 | 13,6 |

Zestaw 75

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2147,961 | 2276,066 |
| 2 | 2337,532 | 1062,692 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 2 | 807,802 | 0,036 |
| 2 | 11 | 1482,012 | 0,070 |
| 2 | 13 | 839,842 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,8 |
| 13 | 1 | 43,47627 | 17,0 |
| 13 | 12 | 81,60028 | 16,0 |
| 13 | 2 | 130,38086 | 14,5 |
| 13 | 11 | 399,99991 | 14,8 |
| 12 | 2 | 0,00000 | 18,5 |
| 12 | 13 | 51,25809 | 17,0 |
| 12 | 11 | 99,37830 | 17,9 |
| 12 | 1 | 124,78028 | 13,9 |
| 12 | 2 | 0,00009 | 18,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69707 | 16,0 |
| 2 | 11 | 13 | 33,58188 | 18,8 |
| 1 | 13 | 12 | 38,12423 | 13,3 |
| 12 | 13 | 2 | 48,78022 | 14,2 |
| 11 | 2 | 1 | 30,35935 | 17,3 |
| 1 | 2 | 12 | 33,56478 | 17,0 |
| 2 | 12 | 13 | 51,25833 | 16,7 |
| 11 | 12 | 1 | 25,40157 | 18,5 |
| 12 | 1 | 2 | 41,65463 | 14,5 |
| 2 | 1 | 13 | 46,69877 | 18,5 |

Zestaw 76

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2806,609 | 2187,816 |
| 2 | 1666,978 | 1730,155 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,813 | 0,041 |
| 12 | 11 | 1250,416 | 0,059 |
| 12 | 2 | 807,791 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 13,9 |
| 13 | 1 | 43,47623 | 14,5 |
| 13 | 12 | 81,60006 | 15,7 |
| 13 | 2 | 130,38093 | 19,1 |
| 13 | 11 | 399,99991 | 13,9 |
| 11 | 1 | 0,00000 | 17,6 |
| 11 | 12 | 24,69077 | 16,0 |
| 11 | 2 | 61,38802 | 18,2 |
| 11 | 13 | 94,97056 | 14,5 |
| 11 | 1 | 0,00003 | 17,6 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69728 | 15,1 |
| 2 | 11 | 13 | 33,58222 | 15,1 |
| 1 | 13 | 12 | 38,12429 | 13,3 |
| 12 | 13 | 2 | 48,78022 | 15,1 |
| 13 | 2 | 11 | 36,03750 | 13,9 |
| 1 | 2 | 12 | 33,56441 | 15,1 |
| 13 | 12 | 11 | 48,12006 | 17,9 |
| 11 | 12 | 1 | 25,40157 | 16,4 |
| 2 | 1 | 13 | 46,69864 | 16,7 |
| 13 | 1 | 11 | 61,55336 | 16,7 |

Zestaw 77

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2679,509 | 1350,504 |
| 2 | 2532,400 | 2569,755 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,690 | 0,053 |
| 12 | 11 | 1250,404 | 0,067 |
| 12 | 2 | 807,800 | 0,036 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 15,4 |
| 12 | 13 | 51,25830 | 15,4 |
| 12 | 11 | 99,37873 | 17,6 |
| 12 | 1 | 124,78006 | 16,7 |
| 12 | 2 | 399,99991 | 15,4 |
| 11 | 1 | 0,00000 | 17,0 |
| 11 | 12 | 24,69071 | 14,8 |
| 11 | 2 | 61,38861 | 13,6 |
| 11 | 13 | 94,97052 | 18,5 |
| 11 | 1 | 0,00006 | 17,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69108 | 16,4 |
| 12 | 11 | 2 | 36,69707 | 17,3 |
| 11 | 13 | 1 | 43,47608 | 15,1 |
| 1 | 13 | 12 | 38,12438 | 15,1 |
| 11 | 2 | 1 | 30,35935 | 12,0 |
| 1 | 2 | 12 | 33,56451 | 14,8 |
| 2 | 12 | 13 | 51,25840 | 17,9 |
| 11 | 12 | 1 | 25,40191 | 15,4 |
| 2 | 1 | 13 | 46,69864 | 14,2 |
| 13 | 1 | 11 | 61,55336 | 15,4 |

Zestaw 78

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2871,314 | 1530,110 |
| 2 | 2160,256 | 2531,413 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,924 | 0,060 |
| 12 | 2 | 807,795 | 0,044 |
| 2 | 11 | 1482,012 | 0,073 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 16,0 |
| 12 | 13 | 51,25840 | 16,4 |
| 12 | 11 | 99,37861 | 15,4 |
| 12 | 1 | 124,78059 | 13,9 |
| 12 | 2 | 399,99997 | 16,0 |
| 13 | 11 | 0,00000 | 18,2 |
| 13 | 1 | 43,47614 | 14,2 |
| 13 | 12 | 81,60059 | 15,4 |
| 13 | 2 | 130,38096 | 19,1 |
| 13 | 11 | 399,99991 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69111 | 18,5 |
| 2 | 11 | 13 | 33,58225 | 14,2 |
| 1 | 13 | 12 | 38,12420 | 15,4 |
| 12 | 13 | 2 | 48,78034 | 15,1 |
| 11 | 2 | 1 | 30,35920 | 17,6 |
| 1 | 2 | 12 | 33,56497 | 17,3 |
| 2 | 12 | 13 | 51,25836 | 15,1 |
| 13 | 12 | 11 | 48,12031 | 14,8 |
| 2 | 1 | 13 | 46,69870 | 17,0 |
| 13 | 1 | 11 | 61,55355 | 14,2 |

Zestaw 79

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2097,858 | 2242,120 |
| 2 | 2423,568 | 1058,006 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,019 | 0,043 |
| 12 | 11 | 1250,417 | 0,066 |
| 12 | 2 | 807,784 | 0,042 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 14,5 |
| 11 | 12 | 24,69099 | 16,7 |
| 11 | 2 | 61,38836 | 16,0 |
| 11 | 13 | 94,97031 | 17,9 |
| 11 | 1 | 399,99981 | 14,5 |
| 13 | 11 | 0,00000 | 18,2 |
| 13 | 1 | 43,47633 | 17,0 |
| 13 | 12 | 81,60040 | 18,2 |
| 13 | 2 | 130,38068 | 19,1 |
| 13 | 11 | 0,00015 | 18,2 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69731 | 17,3 |
| 2 | 11 | 13 | 33,58201 | 16,7 |
| 11 | 13 | 1 | 43,47580 | 10,5 |
| 1 | 13 | 12 | 38,12420 | 14,5 |
| 13 | 2 | 11 | 36,03710 | 11,4 |
| 1 | 2 | 12 | 33,56481 | 17,6 |
| 2 | 12 | 13 | 51,25799 | 15,1 |
| 13 | 12 | 11 | 48,12056 | 17,0 |
| 12 | 1 | 2 | 41,65503 | 13,3 |
| 13 | 1 | 11 | 61,55324 | 14,8 |

Zestaw 80

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1897,638 | 1717,281 |
| 2 | 3102,673 | 1480,421 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 13 | 1083,697 | 0,050 |
| 1 | 11 | 686,014 | 0,041 |
| 2 | 11 | 1482,003 | 0,075 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47614 | 18,8 |
| 13 | 12 | 81,60015 | 15,7 |
| 13 | 2 | 130,38099 | 19,1 |
| 13 | 11 | 399,99997 | 16,4 |
| 12 | 2 | 0,00000 | 13,9 |
| 12 | 13 | 51,25787 | 14,5 |
| 12 | 11 | 99,37827 | 12,7 |
| 12 | 1 | 124,78009 | 17,0 |
| 12 | 2 | 0,00012 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69077 | 18,8 |
| 12 | 11 | 2 | 36,69704 | 17,9 |
| 11 | 13 | 1 | 43,47602 | 16,0 |
| 1 | 13 | 12 | 38,12398 | 13,6 |
| 13 | 2 | 11 | 36,03744 | 11,1 |
| 11 | 2 | 1 | 30,35969 | 13,0 |
| 2 | 12 | 13 | 51,25821 | 17,6 |
| 13 | 12 | 11 | 48,12034 | 15,1 |
| 2 | 1 | 13 | 46,69889 | 16,4 |
| 13 | 1 | 11 | 61,55352 | 16,7 |

Zestaw 81

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2949,181 | 1900,212 |
| 2 | 1753,146 | 2178,983 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 11 | 686,009 | 0,042 |
| 12 | 13 | 1164,929 | 0,068 |
| 2 | 11 | 1481,996 | 0,072 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,7 |
| 11 | 12 | 24,69071 | 15,1 |
| 11 | 2 | 61,38840 | 18,2 |
| 11 | 13 | 94,97012 | 17,3 |
| 11 | 1 | 399,99997 | 16,7 |
| 12 | 2 | 0,00000 | 16,0 |
| 12 | 13 | 51,25809 | 15,4 |
| 12 | 11 | 99,37870 | 17,9 |
| 12 | 1 | 124,78006 | 16,7 |
| 12 | 2 | 399,99991 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69707 | 17,0 |
| 2 | 11 | 13 | 33,58231 | 16,0 |
| 11 | 13 | 1 | 43,47617 | 11,4 |
| 12 | 13 | 2 | 48,78046 | 16,4 |
| 13 | 2 | 11 | 36,03744 | 12,0 |
| 1 | 2 | 12 | 33,56485 | 17,9 |
| 2 | 12 | 13 | 51,25784 | 13,9 |
| 11 | 12 | 1 | 25,40185 | 13,6 |
| 12 | 1 | 2 | 41,65512 | 14,2 |
| 2 | 1 | 13 | 46,69883 | 12,7 |

Zestaw 82

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1903,098 | 1943,715 |
| 2 | 2901,409 | 1228,462 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,703 | 0,049 |
| 12 | 13 | 1164,913 | 0,065 |
| 11 | 13 | 894,807 | 0,045 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 16,7 |
| 11 | 12 | 24,69071 | 18,5 |
| 11 | 2 | 61,38840 | 12,7 |
| 11 | 13 | 94,97022 | 13,3 |
| 11 | 1 | 0,00019 | 16,7 |
| 12 | 2 | 0,00000 | 16,0 |
| 12 | 13 | 51,25790 | 19,1 |
| 12 | 11 | 99,37818 | 16,7 |
| 12 | 1 | 124,78019 | 18,8 |
| 12 | 2 | 399,99975 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69083 | 19,4 |
| 2 | 11 | 13 | 33,58188 | 13,3 |
| 11 | 13 | 1 | 43,47627 | 13,3 |
| 1 | 13 | 12 | 38,12392 | 13,3 |
| 11 | 2 | 1 | 30,35969 | 13,3 |
| 1 | 2 | 12 | 33,56444 | 16,0 |
| 2 | 12 | 13 | 51,25815 | 18,5 |
| 11 | 12 | 1 | 25,40182 | 18,8 |
| 2 | 1 | 13 | 46,69836 | 14,5 |
| 13 | 1 | 11 | 61,55383 | 16,4 |

Zestaw 83

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2832,887 | 1477,475 |
| 2 | 2249,158 | 2557,971 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,919 | 0,068 |
| 12 | 2 | 807,793 | 0,039 |
| 11 | 13 | 894,793 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,6 |
| 11 | 12 | 24,69071 | 19,4 |
| 11 | 2 | 61,38806 | 17,6 |
| 11 | 13 | 94,97059 | 14,5 |
| 11 | 1 | 399,99978 | 17,6 |
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25793 | 15,4 |
| 12 | 11 | 99,37864 | 14,2 |
| 12 | 1 | 124,78012 | 17,9 |
| 12 | 2 | 399,99981 | 16,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69086 | 15,7 |
| 12 | 11 | 2 | 36,69759 | 12,3 |
| 11 | 13 | 1 | 43,47577 | 12,0 |
| 12 | 13 | 2 | 48,78062 | 12,0 |
| 11 | 2 | 1 | 30,35932 | 16,7 |
| 1 | 2 | 12 | 33,56460 | 14,2 |
| 2 | 12 | 13 | 51,25818 | 13,9 |
| 13 | 12 | 11 | 48,12015 | 18,5 |
| 12 | 1 | 2 | 41,65481 | 15,7 |
| 2 | 1 | 13 | 46,69846 | 13,9 |

Zestaw 84

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2527,026 | 1294,647 |
| 2 | 2753,361 | 2501,704 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,699 | 0,048 |
| 1 | 11 | 686,010 | 0,037 |
| 12 | 13 | 1164,930 | 0,061 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47623 | 17,0 |
| 13 | 12 | 81,60049 | 16,7 |
| 13 | 2 | 130,38059 | 17,6 |
| 13 | 11 | 399,99972 | 16,4 |
| 12 | 2 | 0,00000 | 19,4 |
| 12 | 13 | 51,25799 | 18,5 |
| 12 | 11 | 99,37830 | 18,2 |
| 12 | 1 | 124,78052 | 17,0 |
| 12 | 2 | 399,99991 | 19,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69728 | 16,7 |
| 2 | 11 | 13 | 33,58204 | 17,9 |
| 1 | 13 | 12 | 38,12420 | 16,4 |
| 12 | 13 | 2 | 48,78062 | 13,9 |
| 11 | 2 | 1 | 30,35960 | 13,0 |
| 1 | 2 | 12 | 33,56457 | 18,8 |
| 2 | 12 | 13 | 51,25799 | 17,3 |
| 11 | 12 | 1 | 25,40173 | 17,9 |
| 12 | 1 | 2 | 41,65509 | 17,3 |
| 2 | 1 | 13 | 46,69849 | 13,9 |

Zestaw 85

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2952,986 | 1765,549 |
| 2 | 1864,846 | 2334,903 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,403 | 0,067 |
| 12 | 13 | 1164,930 | 0,062 |
| 2 | 13 | 839,843 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25830 | 17,9 |
| 12 | 11 | 99,37852 | 16,7 |
| 12 | 1 | 124,78056 | 17,9 |
| 12 | 2 | 0,00003 | 17,3 |
| 11 | 1 | 0,00000 | 17,3 |
| 11 | 12 | 24,69123 | 14,2 |
| 11 | 2 | 61,38849 | 13,6 |
| 11 | 13 | 94,97015 | 13,9 |
| 11 | 1 | 399,99994 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69756 | 16,0 |
| 2 | 11 | 13 | 33,58185 | 16,0 |
| 11 | 13 | 1 | 43,47593 | 10,5 |
| 1 | 13 | 12 | 38,12441 | 14,8 |
| 11 | 2 | 1 | 30,35975 | 12,3 |
| 1 | 2 | 12 | 33,56478 | 13,6 |
| 13 | 12 | 11 | 48,12043 | 13,3 |
| 11 | 12 | 1 | 25,40194 | 15,7 |
| 12 | 1 | 2 | 41,65463 | 18,2 |
| 2 | 1 | 13 | 46,69843 | 17,3 |

Zestaw 86

Współrzędne osnovy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2949,879 | 1895,607 |
| 2 | 1756,322 | 2184,804 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 13 | 1164,931 | 0,060 |
| 2 | 13 | 839,840 | 0,037 |
| 11 | 13 | 894,805 | 0,049 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,5 |
| 12 | 13 | 51,25833 | 18,2 |
| 12 | 11 | 99,37861 | 17,0 |
| 12 | 1 | 124,78059 | 17,3 |
| 12 | 2 | 0,00003 | 18,5 |
| 13 | 11 | 0,00000 | 17,9 |
| 13 | 1 | 43,47599 | 16,0 |
| 13 | 12 | 81,60009 | 14,8 |
| 13 | 2 | 130,38046 | 15,7 |
| 13 | 11 | 0,00006 | 17,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69127 | 19,4 |
| 2 | 11 | 13 | 33,58225 | 16,4 |
| 11 | 13 | 1 | 43,47617 | 10,2 |
| 1 | 13 | 12 | 38,12395 | 15,4 |
| 11 | 2 | 1 | 30,35972 | 14,2 |
| 1 | 2 | 12 | 33,56460 | 13,9 |
| 2 | 12 | 13 | 51,25830 | 17,3 |
| 11 | 12 | 1 | 25,40213 | 15,7 |
| 12 | 1 | 2 | 41,65491 | 13,3 |
| 13 | 1 | 11 | 61,55358 | 18,8 |

Zestaw 87

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1951,116 | 2069,584 |
| 2 | 2738,543 | 1127,156 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 2 | 807,789 | 0,044 |
| 2 | 11 | 1482,003 | 0,073 |
| 11 | 13 | 894,795 | 0,044 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25787 | 14,8 |
| 12 | 11 | 99,37836 | 17,0 |
| 12 | 1 | 124,78015 | 17,6 |
| 12 | 2 | 399,99972 | 14,8 |
| 11 | 1 | 0,00000 | 15,4 |
| 11 | 12 | 24,69086 | 18,5 |
| 11 | 2 | 61,38843 | 13,9 |
| 11 | 13 | 94,97043 | 15,7 |
| 11 | 1 | 399,99988 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69102 | 17,9 |
| 12 | 11 | 2 | 36,69741 | 14,8 |
| 11 | 13 | 1 | 43,47614 | 12,3 |
| 1 | 13 | 12 | 38,12444 | 12,7 |
| 13 | 2 | 11 | 36,03744 | 14,8 |
| 11 | 2 | 1 | 30,35975 | 14,8 |
| 2 | 12 | 13 | 51,25806 | 13,9 |
| 13 | 12 | 11 | 48,12012 | 13,6 |
| 2 | 1 | 13 | 46,69843 | 14,8 |
| 13 | 1 | 11 | 61,55349 | 14,2 |

Zestaw 88

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2149,861 | 1358,652 |
| 2 | 3125,739 | 2104,222 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,802 | 0,040 |
| 12 | 11 | 1250,417 | 0,063 |
| 2 | 11 | 1482,011 | 0,070 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,3 |
| 11 | 12 | 24,69108 | 18,2 |
| 11 | 2 | 61,38836 | 14,8 |
| 11 | 13 | 94,97056 | 14,8 |
| 11 | 1 | 0,00009 | 17,3 |
| 13 | 11 | 0,00000 | 15,7 |
| 13 | 1 | 43,47611 | 15,7 |
| 13 | 12 | 81,60003 | 16,4 |
| 13 | 2 | 130,38046 | 17,0 |
| 13 | 11 | 0,00028 | 15,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69102 | 16,0 |
| 12 | 11 | 2 | 36,69725 | 16,4 |
| 11 | 13 | 1 | 43,47630 | 11,1 |
| 12 | 13 | 2 | 48,78056 | 16,4 |
| 13 | 2 | 11 | 36,03694 | 14,2 |
| 1 | 2 | 12 | 33,56485 | 14,2 |
| 13 | 12 | 11 | 48,12015 | 16,7 |
| 11 | 12 | 1 | 25,40170 | 15,7 |
| 12 | 1 | 2 | 41,65497 | 16,0 |
| 13 | 1 | 11 | 61,55373 | 17,0 |

Zestaw 89

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1964,932 | 2093,874 |
| 2 | 2701,957 | 1111,526 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 13 | 1083,703 | 0,049 |
| 12 | 11 | 1250,420 | 0,067 |
| 12 | 2 | 807,784 | 0,043 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,8 |
| 12 | 13 | 51,25818 | 16,0 |
| 12 | 11 | 99,37867 | 14,5 |
| 12 | 1 | 124,78037 | 13,3 |
| 12 | 2 | 399,99997 | 18,8 |
| 11 | 1 | 0,00000 | 16,0 |
| 11 | 12 | 24,69074 | 13,9 |
| 11 | 2 | 61,38827 | 15,4 |
| 11 | 13 | 94,97043 | 18,2 |
| 11 | 1 | 0,00015 | 16,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 17,6 |
| 2 | 11 | 13 | 33,58222 | 14,5 |
| 11 | 13 | 1 | 43,47608 | 12,0 |
| 1 | 13 | 12 | 38,12432 | 14,8 |
| 11 | 2 | 1 | 30,35966 | 17,3 |
| 1 | 2 | 12 | 33,56469 | 18,8 |
| 2 | 12 | 13 | 51,25836 | 17,0 |
| 13 | 12 | 11 | 48,12031 | 15,1 |
| 12 | 1 | 2 | 41,65460 | 16,0 |
| 2 | 1 | 13 | 46,69867 | 18,2 |

Zestaw 90

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2305,094 | 1297,093 |
| 2 | 3002,816 | 2307,735 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,800 | 0,039 |
| 1 | 11 | 686,009 | 0,036 |
| 2 | 11 | 1481,999 | 0,075 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 17,9 |
| 11 | 12 | 24,69105 | 18,8 |
| 11 | 2 | 61,38809 | 15,4 |
| 11 | 13 | 94,97046 | 17,6 |
| 11 | 1 | 0,00015 | 17,9 |
| 12 | 2 | 0,00000 | 15,7 |
| 12 | 13 | 51,25812 | 14,5 |
| 12 | 11 | 99,37821 | 15,1 |
| 12 | 1 | 124,78037 | 17,0 |
| 12 | 2 | 0,00003 | 15,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69074 | 14,2 |
| 2 | 11 | 13 | 33,58216 | 15,7 |
| 1 | 13 | 12 | 38,12432 | 14,8 |
| 12 | 13 | 2 | 48,78052 | 12,0 |
| 13 | 2 | 11 | 36,03704 | 13,9 |
| 1 | 2 | 12 | 33,56497 | 17,9 |
| 2 | 12 | 13 | 51,25830 | 16,0 |
| 11 | 12 | 1 | 25,40210 | 18,2 |
| 12 | 1 | 2 | 41,65500 | 13,6 |
| 2 | 1 | 13 | 46,69873 | 18,5 |

Zestaw 91

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2070,719 | 1415,902 |
| 2 | 3166,126 | 1971,148 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,805 | 0,039 |
| 1 | 11 | 686,020 | 0,041 |
| 12 | 11 | 1250,419 | 0,066 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,8 |
| 13 | 1 | 43,47602 | 17,3 |
| 13 | 12 | 81,60049 | 13,9 |
| 13 | 2 | 130,38077 | 15,4 |
| 13 | 11 | 399,99981 | 14,8 |
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25818 | 13,9 |
| 12 | 11 | 99,37833 | 16,4 |
| 12 | 1 | 124,78059 | 15,4 |
| 12 | 2 | 399,99969 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69744 | 13,9 |
| 2 | 11 | 13 | 33,58188 | 17,3 |
| 11 | 13 | 1 | 43,47590 | 12,3 |
| 1 | 13 | 12 | 38,12398 | 15,4 |
| 13 | 2 | 11 | 36,03716 | 13,6 |
| 1 | 2 | 12 | 33,56469 | 13,6 |
| 2 | 12 | 13 | 51,25815 | 13,3 |
| 11 | 12 | 1 | 25,40173 | 14,2 |
| 12 | 1 | 2 | 41,65475 | 19,1 |
| 13 | 1 | 11 | 61,55352 | 17,0 |

Zestaw 92

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2242,491 | 1315,200 |
| 2 | 3058,178 | 2233,278 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,411 | 0,061 |
| 12 | 13 | 1164,927 | 0,065 |
| 12 | 2 | 807,788 | 0,040 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 14,8 |
| 12 | 13 | 51,25830 | 15,1 |
| 12 | 11 | 99,37855 | 14,2 |
| 12 | 1 | 124,78046 | 19,1 |
| 12 | 2 | 399,99975 | 14,8 |
| 13 | 11 | 0,00000 | 18,5 |
| 13 | 1 | 43,47599 | 17,0 |
| 13 | 12 | 81,60028 | 16,0 |
| 13 | 2 | 130,38043 | 15,4 |
| 13 | 11 | 399,99985 | 18,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69114 | 13,6 |
| 2 | 11 | 13 | 33,58222 | 18,5 |
| 11 | 13 | 1 | 43,47623 | 10,8 |
| 1 | 13 | 12 | 38,12392 | 13,6 |
| 13 | 2 | 11 | 36,03694 | 13,0 |
| 11 | 2 | 1 | 30,35941 | 17,6 |
| 2 | 12 | 13 | 51,25830 | 16,4 |
| 13 | 12 | 11 | 48,12031 | 17,6 |
| 12 | 1 | 2 | 41,65466 | 16,4 |
| 13 | 1 | 11 | 61,55327 | 17,0 |

Zestaw 93

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 1949,967 | 1568,425 |
| 2 | 3171,599 | 1694,233 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|---------|-----------|
| 12 | 2 | 807,791 | 0,043 |
| 2 | 13 | 839,837 | 0,037 |
| 11 | 13 | 894,791 | 0,051 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 14,8 |
| 13 | 1 | 43,47623 | 18,5 |
| 13 | 12 | 81,60037 | 14,5 |
| 13 | 2 | 130,38059 | 14,2 |
| 13 | 11 | 0,00015 | 14,8 |
| 11 | 1 | 0,00000 | 13,9 |
| 11 | 12 | 24,69083 | 14,5 |
| 11 | 2 | 61,38815 | 12,3 |
| 11 | 13 | 94,97043 | 16,7 |
| 11 | 1 | 399,99972 | 13,9 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69704 | 16,0 |
| 2 | 11 | 13 | 33,58201 | 16,0 |
| 11 | 13 | 1 | 43,47633 | 16,0 |
| 12 | 13 | 2 | 48,78062 | 13,0 |
| 11 | 2 | 1 | 30,35938 | 15,4 |
| 1 | 2 | 12 | 33,56441 | 17,0 |
| 2 | 12 | 13 | 51,25812 | 17,0 |
| 13 | 12 | 11 | 48,12019 | 17,6 |
| 12 | 1 | 2 | 41,65500 | 18,5 |
| 2 | 1 | 13 | 46,69892 | 15,7 |

Zestaw 94

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2955,346 | 1802,729 |
| 2 | 1830,140 | 2294,792 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,804 | 0,039 |
| 1 | 13 | 1083,684 | 0,054 |
| 11 | 13 | 894,795 | 0,050 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,5 |
| 12 | 13 | 51,25821 | 16,0 |
| 12 | 11 | 99,37824 | 13,9 |
| 12 | 1 | 124,78028 | 18,5 |
| 12 | 2 | 0,00003 | 18,5 |
| 13 | 11 | 0,00000 | 14,5 |
| 13 | 1 | 43,47577 | 17,9 |
| 13 | 12 | 81,60028 | 16,4 |
| 13 | 2 | 130,38052 | 13,6 |
| 13 | 11 | 399,99988 | 14,5 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69074 | 13,9 |
| 12 | 11 | 2 | 36,69753 | 17,9 |
| 11 | 13 | 1 | 43,47596 | 10,5 |
| 1 | 13 | 12 | 38,12404 | 17,9 |
| 13 | 2 | 11 | 36,03701 | 10,5 |
| 1 | 2 | 12 | 33,56469 | 13,3 |
| 2 | 12 | 13 | 51,25840 | 14,2 |
| 13 | 12 | 11 | 48,12031 | 12,7 |
| 12 | 1 | 2 | 41,65491 | 18,8 |
| 2 | 1 | 13 | 46,69849 | 13,9 |

Zestaw 95

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2236,037 | 2318,300 |
| 2 | 2201,313 | 1090,697 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 12 | 667,813 | 0,041 |
| 1 | 11 | 686,018 | 0,037 |
| 2 | 11 | 1482,000 | 0,071 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 16,7 |
| 12 | 13 | 51,25796 | 17,3 |
| 12 | 11 | 99,37870 | 13,6 |
| 12 | 1 | 124,78056 | 14,5 |
| 12 | 2 | 399,99972 | 16,7 |
| 11 | 1 | 0,00000 | 13,6 |
| 11 | 12 | 24,69120 | 15,1 |
| 11 | 2 | 61,38815 | 16,0 |
| 11 | 13 | 94,97043 | 17,6 |
| 11 | 1 | 0,00028 | 13,6 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69096 | 14,8 |
| 2 | 11 | 13 | 33,58210 | 14,5 |
| 1 | 13 | 12 | 38,12432 | 14,8 |
| 12 | 13 | 2 | 48,78059 | 13,3 |
| 11 | 2 | 1 | 30,35960 | 16,4 |
| 1 | 2 | 12 | 33,56494 | 17,6 |
| 2 | 12 | 13 | 51,25827 | 14,5 |
| 11 | 12 | 1 | 25,40210 | 17,0 |
| 2 | 1 | 13 | 46,69846 | 13,3 |
| 13 | 1 | 11 | 61,55383 | 17,3 |

Zestaw 96

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2369,437 | 1286,751 |
| 2 | 2938,792 | 2374,891 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 12 | 11 | 1250,419 | 0,061 |
| 12 | 2 | 807,790 | 0,041 |
| 2 | 11 | 1481,994 | 0,075 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 12 | 2 | 0,00000 | 18,2 |
| 12 | 13 | 51,25833 | 18,5 |
| 12 | 11 | 99,37815 | 16,4 |
| 12 | 1 | 124,78019 | 14,5 |
| 12 | 2 | 0,00006 | 18,2 |
| 13 | 11 | 0,00000 | 16,4 |
| 13 | 1 | 43,47590 | 17,6 |
| 13 | 12 | 81,60000 | 17,3 |
| 13 | 2 | 130,38083 | 16,4 |
| 13 | 11 | 0,00003 | 16,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69074 | 19,1 |
| 2 | 11 | 13 | 33,58188 | 14,5 |
| 11 | 13 | 1 | 43,47627 | 10,8 |
| 1 | 13 | 12 | 38,12444 | 12,7 |
| 11 | 2 | 1 | 30,35978 | 15,1 |
| 1 | 2 | 12 | 33,56472 | 16,4 |
| 13 | 12 | 11 | 48,12009 | 17,0 |
| 11 | 12 | 1 | 25,40188 | 18,8 |
| 12 | 1 | 2 | 41,65463 | 15,1 |
| 13 | 1 | 11 | 61,55355 | 19,1 |

Zestaw 97

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2870,118 | 2107,598 |
| 2 | 1664,099 | 1875,796 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,801 | 0,036 |
| 12 | 13 | 1164,919 | 0,063 |
| 12 | 2 | 807,791 | 0,037 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 15,1 |
| 11 | 12 | 24,69111 | 13,9 |
| 11 | 2 | 61,38855 | 17,9 |
| 11 | 13 | 94,97028 | 16,7 |
| 11 | 1 | 0,00009 | 15,1 |
| 13 | 11 | 0,00000 | 15,7 |
| 13 | 1 | 43,47627 | 19,1 |
| 13 | 12 | 81,60034 | 16,4 |
| 13 | 2 | 130,38074 | 14,8 |
| 13 | 11 | 0,00006 | 15,7 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69080 | 13,9 |
| 2 | 11 | 13 | 33,58198 | 18,5 |
| 11 | 13 | 1 | 43,47608 | 10,5 |
| 1 | 13 | 12 | 38,12444 | 17,9 |
| 11 | 2 | 1 | 30,35969 | 13,0 |
| 1 | 2 | 12 | 33,56448 | 14,8 |
| 2 | 12 | 13 | 51,25818 | 16,7 |
| 11 | 12 | 1 | 25,40179 | 14,8 |
| 12 | 1 | 2 | 41,65506 | 18,8 |
| 13 | 1 | 11 | 61,55336 | 19,4 |

Zestaw 98

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2683,578 | 1352,771 |
| 2 | 2525,834 | 2570,691 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,811 | 0,034 |
| 1 | 13 | 1083,703 | 0,051 |
| 11 | 13 | 894,792 | 0,051 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,3 |
| 13 | 1 | 43,47636 | 17,0 |
| 13 | 12 | 81,60015 | 15,7 |
| 13 | 2 | 130,38046 | 15,4 |
| 13 | 11 | 399,99994 | 17,3 |
| 12 | 2 | 0,00000 | 17,3 |
| 12 | 13 | 51,25806 | 17,9 |
| 12 | 11 | 99,37827 | 15,7 |
| 12 | 1 | 124,78049 | 16,7 |
| 12 | 2 | 0,00022 | 17,3 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 1 | 11 | 12 | 24,69102 | 16,7 |
| 2 | 11 | 13 | 33,58194 | 18,8 |
| 1 | 13 | 12 | 38,12398 | 16,4 |
| 12 | 13 | 2 | 48,78046 | 17,0 |
| 13 | 2 | 11 | 36,03744 | 13,0 |
| 11 | 2 | 1 | 30,35948 | 12,0 |
| 2 | 12 | 13 | 51,25809 | 13,9 |
| 11 | 12 | 1 | 25,40176 | 16,7 |
| 2 | 1 | 13 | 46,69889 | 14,8 |
| 13 | 1 | 11 | 61,55340 | 18,5 |

Zestaw 99

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2852,905 | 1503,205 |
| 2 | 2204,301 | 2546,050 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|----|----|----------|-----------|
| 1 | 12 | 667,814 | 0,034 |
| 12 | 11 | 1250,404 | 0,061 |
| 2 | 11 | 1482,002 | 0,075 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 11 | 1 | 0,00000 | 15,4 |
| 11 | 12 | 24,69096 | 17,6 |
| 11 | 2 | 61,38824 | 13,3 |
| 11 | 13 | 94,97025 | 17,6 |
| 11 | 1 | 0,00019 | 15,4 |
| 12 | 2 | 0,00000 | 15,4 |
| 12 | 13 | 51,25806 | 18,8 |
| 12 | 11 | 99,37827 | 14,8 |
| 12 | 1 | 124,78028 | 19,1 |
| 12 | 2 | 399,99969 | 15,4 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69719 | 12,7 |
| 2 | 11 | 13 | 33,58179 | 16,0 |
| 11 | 13 | 1 | 43,47611 | 10,8 |
| 1 | 13 | 12 | 38,12448 | 13,3 |
| 13 | 2 | 11 | 36,03691 | 15,7 |
| 11 | 2 | 1 | 30,35960 | 17,6 |
| 2 | 12 | 13 | 51,25787 | 18,2 |
| 11 | 12 | 1 | 25,40182 | 13,6 |
| 12 | 1 | 2 | 41,65460 | 14,8 |
| 2 | 1 | 13 | 46,69883 | 18,5 |

Zestaw 100

Współrzędne osnowy

| nr | X[m] | Y[m] |
|----|----------|----------|
| 1 | 2529,424 | 2340,713 |
| 2 | 1849,447 | 1318,048 |

Obserwacje odległości

| p | k | d [m] | m_d [m] |
|---|----|----------|-----------|
| 1 | 13 | 1083,691 | 0,050 |
| 1 | 11 | 686,021 | 0,041 |
| 2 | 11 | 1482,003 | 0,071 |

Obserwacje kierunków

| p | k | K [grad] | m_K [cc] |
|----|----|------------|------------|
| 13 | 11 | 0,00000 | 17,9 |
| 13 | 1 | 43,47633 | 17,9 |
| 13 | 12 | 81,60046 | 13,3 |
| 13 | 2 | 130,38083 | 14,5 |
| 13 | 11 | 399,99975 | 17,9 |
| 12 | 2 | 0,00000 | 17,0 |
| 12 | 13 | 51,25818 | 16,7 |
| 12 | 11 | 99,37836 | 15,4 |
| 12 | 1 | 124,78028 | 17,0 |
| 12 | 2 | 399,99985 | 17,0 |

Obserwacje kątów

| l | c | p | α [grad] | m_α [cc] |
|----|----|----|-----------------|-----------------|
| 12 | 11 | 2 | 36,69704 | 16,4 |
| 2 | 11 | 13 | 33,58188 | 17,9 |
| 11 | 13 | 1 | 43,47602 | 15,1 |
| 12 | 13 | 2 | 48,78034 | 17,0 |
| 13 | 2 | 11 | 36,03691 | 10,5 |
| 1 | 2 | 12 | 33,56457 | 13,9 |
| 2 | 12 | 13 | 51,25796 | 16,7 |
| 13 | 12 | 11 | 48,12034 | 16,4 |
| 12 | 1 | 2 | 41,65491 | 14,2 |
| 13 | 1 | 11 | 61,55343 | 17,3 |