

$$P - \frac{pr}{a}(P+G) = A.$$

$$\frac{2}{3} \frac{pr}{a}(P+G) = B. \text{ und}$$

$$\frac{6}{a}(Q+W) + \frac{pr}{a}(Q+W) = C \text{ gesucht,}$$

so ist:

$$\sin \alpha = \frac{AC + B\sqrt{A^2 + B^2} - C^2}{A^2 + B^2}$$

Sin im folgenden Sinn:

$$A = 850 - \frac{0,2 \cdot 1}{150} (850 + 6000)$$

$$= 850 - \frac{0,2}{15} \cdot 6850.$$

$$= 850 - \frac{68,5 \cdot 2}{15} = 850 - \frac{137}{15}$$

$$= 850 - 9,1333 = 840,8667.$$

$$B = \frac{2 \cdot 0,2}{3 \cdot 150} \cdot 6850 = \frac{0,4}{45} \cdot 6850.$$

$$= \frac{274}{45} = 6,0888.$$

$$C = \frac{6,25}{12,5} \cdot 400 + \frac{0,2}{150} \cdot 400.$$

$$= 200 + \frac{8}{15} = 200 + 0,5333.$$

$$= 200,5333. \text{ Anmerkung:}$$

$$AC = 840,8667 \cdot 200,5333$$

$$= 168621,774211$$

$$A^2 = 707056,807$$

$$B^2 = 37,073.$$

$$C^2 = 40213,6044.$$

$$A^2 + B^2 = 707093,88.$$

$$A^2 + B^2 - C^2 = 666880,2756 \text{ also}$$

$$\sin \alpha = \frac{168621,774211 + 6,0888 \sqrt{666880,2756}}{707093,88}$$

$$= \frac{168621,774211 + 6,0888 \cdot 816,627}{707093,88}$$

$$= \frac{168621,774211 + 4972,2784776}{707093,88}$$

$$= \frac{173594,0526887}{707093,88} = 0,245573$$

und hiermit

$$\alpha = 14^\circ 12' 41''$$