TBM2 Stahlorangen, 26.4.2012

(1) $q^{10} = 0.6$ → Bsp.: $K_0 = 100.-$

$K_{10} = 60.-$

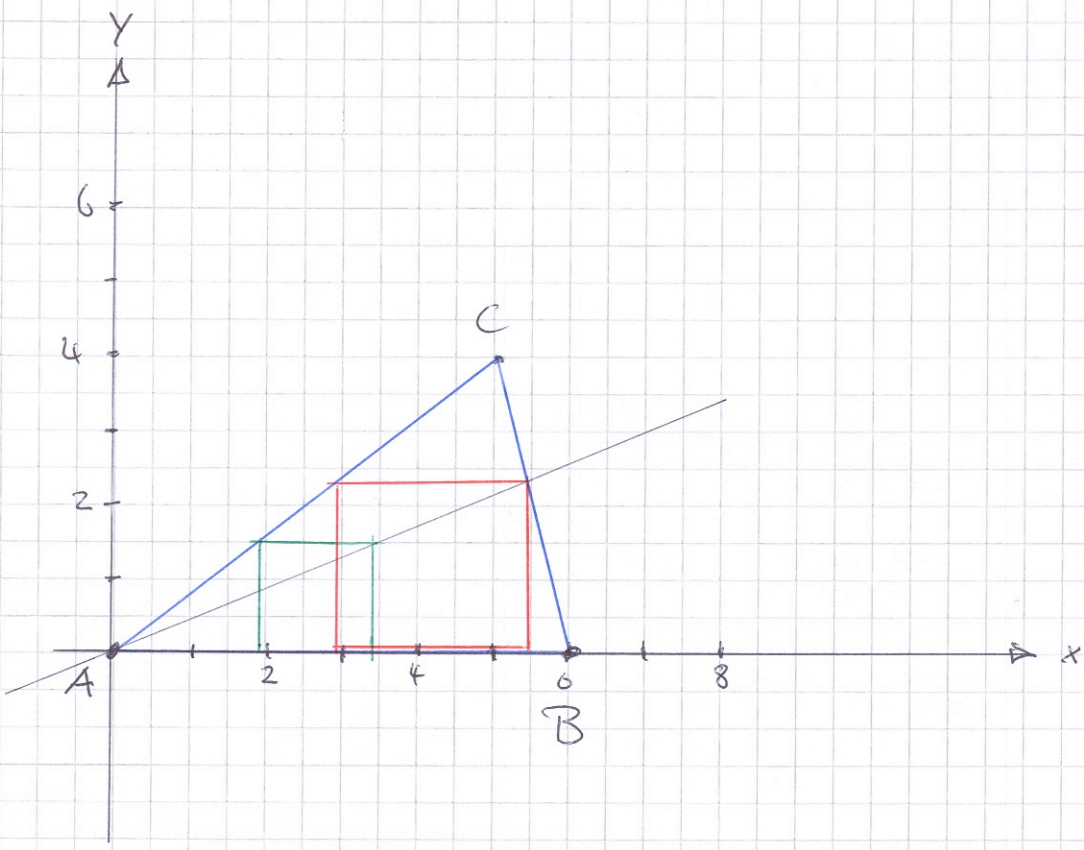
$K_{10} = K_0 \cdot q^{10}$

$q = \sqrt[10]{0.6} \approx 0.9502$

$p = q - 1 = -0.0498 = \underline{-4.98\ \%}$

$q^{15} = 0.465$ → $\underline{46.46\ \%}$ des Neupreises

(2)



(4) $\frac{c}{a} = \frac{d}{b} \Rightarrow d = \frac{bc}{a} = \underline{\underline{8.75}}$

(5) $\frac{a}{a+b} = \frac{e}{f} \quad / \cdot f \cdot (a+b)$

$af = ae + be \quad / - ae$

$af - ae = be$

$a = \frac{be}{f-e} = \frac{12.5 \cdot 2}{7-2} = \frac{25}{5} = \underline{\underline{5m}}$

$\frac{a/}{a+b+c} \quad \frac{a}{e} = \frac{a+b+c}{g}$

$\frac{e}{a} = \frac{g}{a+b+c}$

$g = \frac{e(a+b+c)}{a} = \frac{2(5+12.5+26.25)}{5}$

$\underline{\underline{g = 17.5m}}$

(6) $\frac{a}{a+b} = \frac{f-e}{g-e}$

$\frac{a+b}{a} = \frac{g-e}{f-e}$

$\frac{(a+b)(f-e)}{a} + e = g$

$\frac{10 \cdot 9}{6} = \underline{\underline{15}}$

$\frac{(6+4)(12-3)}{6} + 3$

$\frac{10 \cdot 9}{6} + 3 = 15 + 3 = \underline{\underline{18}}$

(7) $b : c = e : f$

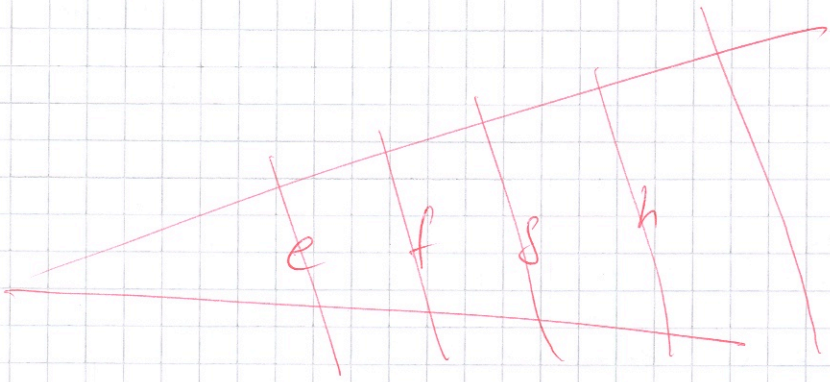
$$c = \frac{bf}{e} = \frac{2 \cdot 7.5}{3} = \underline{\underline{5\,cm}}$$

$$\frac{a}{b} = \frac{d}{e}$$

$$d = \frac{ae}{b} = \frac{3 \cdot 3}{2} = \underline{\underline{4.5\,cm}}$$

$$\frac{a}{b} = \frac{g}{h} \Rightarrow \frac{b}{a} = \frac{h}{g} \Rightarrow h = \frac{bg}{a} = \underline{\underline{7\,cm}}$$

$$\frac{a}{c} = \frac{g}{i} \Rightarrow \frac{cg}{a} = i = \frac{52.5}{3} = \underline{\underline{17.5\,cm}}$$



$$\frac{a}{a+b} = \frac{e}{f}$$

$e : f = f : g$?

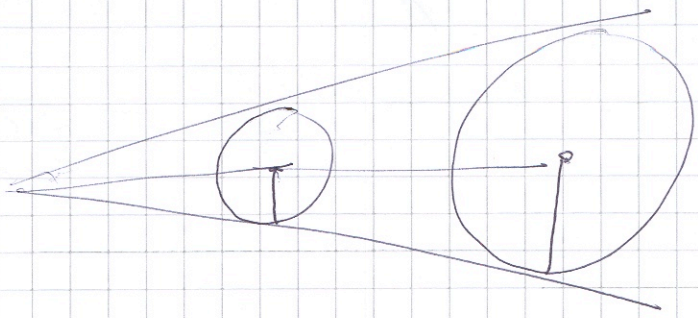
$f : g = g : h$.

↳ Hinweis

allg.: Genauigkeit!

keine Toleranz in Zukunft!

(8)



$d_{Mond} : d_{Sonne} = r_M : r_S$

$$\frac{d_S \cdot r_M}{d_M} = r_S = 1'350'674.3\,km$$

$$= 388.57 \cdot d_M$$

$$2r_S = 2'701'348.6\,km$$

$$\frac{d_S}{d_M} = \frac{r_S}{r_M} \Rightarrow r_S = r_M \cdot \frac{d_S}{d_M}$$

$$= 1'350'674.3\,km$$

$$= \underline{1'350'674'285\,m}$$

b) 3.508-mal ist Sonne grösser als Abstand Erde-Mond