

1.

$$80\% = \frac{80}{100} = \frac{4}{5}$$

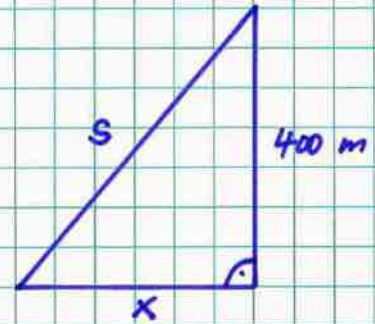
$$\Rightarrow \frac{400}{x} = \frac{4}{5}$$

$$2'000 = 4 \cdot x$$

$$\underline{500 = x}$$

$$| \cdot 5 \cdot x$$

$$1:4$$



$\Rightarrow$  Pythagoras :

$$s^2 = x^2 + 400^2$$

$$s^2 = 500^2 + 400^2$$

$| \sqrt{\quad}$

$$s = \sqrt{500^2 + 400^2}$$

$$\hat{=} \underline{\underline{640,31 \text{ m}}}$$

2.

Pythagoras :

$$x^2 + 400^2 = 1'040^2$$

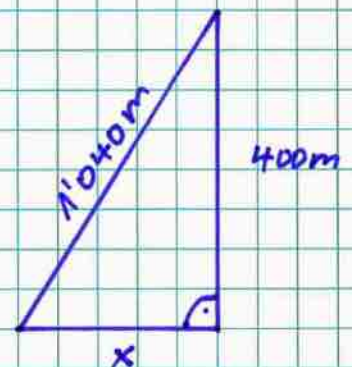
$$| - 400^2$$

$$x^2 = 1'040^2 - 400^2$$

$$| \sqrt{\quad}$$

$$x = \sqrt{1'040^2 - 400^2}$$

$$= \underline{\underline{960 \text{ (m)}}}$$

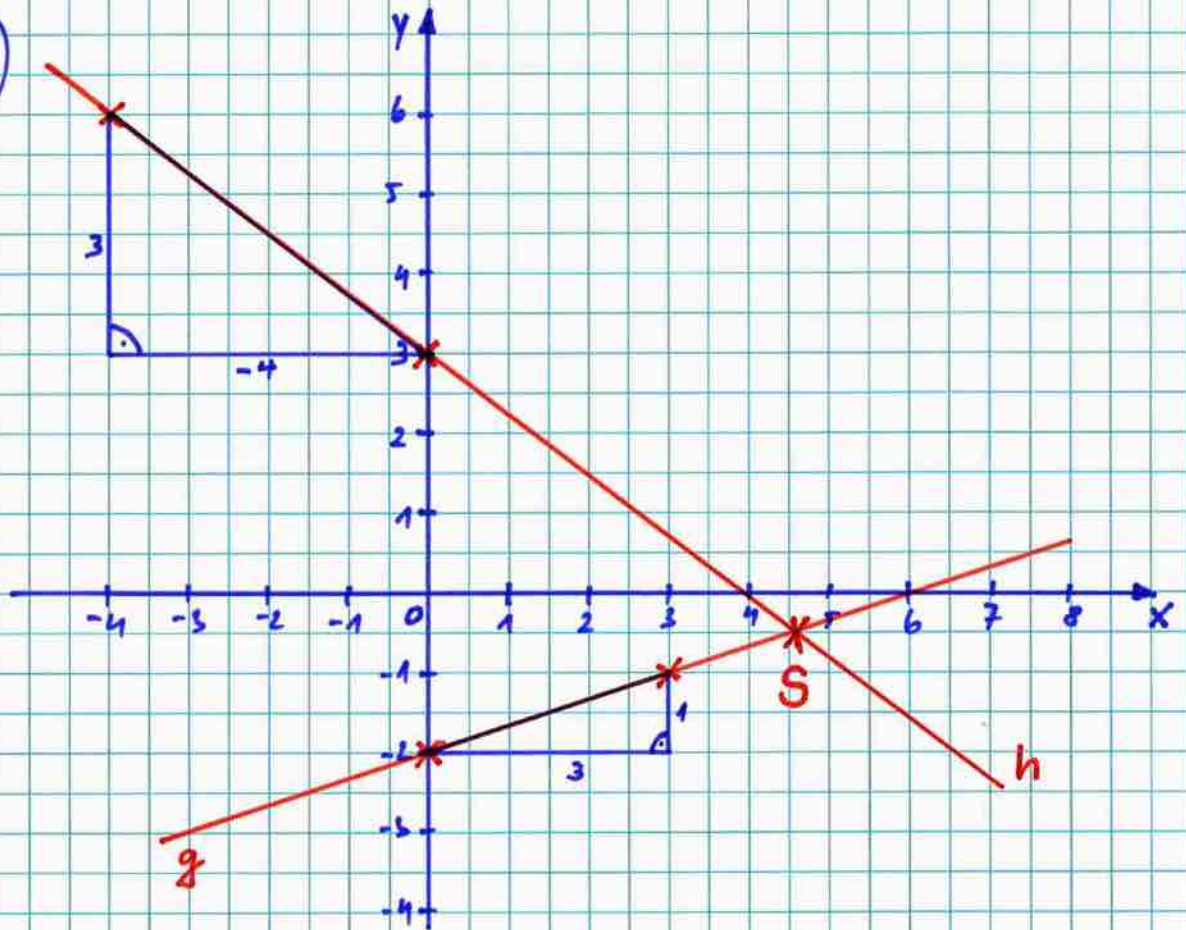


$$\Rightarrow \underline{\text{Steigung}} : \frac{400}{960} = \frac{5}{12}$$

$$\rightarrow \text{arc tan} (\tan^{-1}) \frac{5}{12} \hat{=} \underline{\underline{22,6^\circ}}$$

3.

a.)



b.)  $g: y_g = \frac{1}{3} \cdot x - 2$

$h: y_h = -\frac{3}{4} \cdot x + 3$

$\Rightarrow y_g = y_h$

$\Rightarrow \frac{1}{3} \cdot x - 2 = -\frac{3}{4} \cdot x + 3 \quad | \cdot 12 \quad ( \cdot 3 \cdot 4 )$

$4 \cdot x - 24 = -9 \cdot x + 36 \quad | + 9x$

$13 \cdot x - 24 = 36 \quad | + 24$

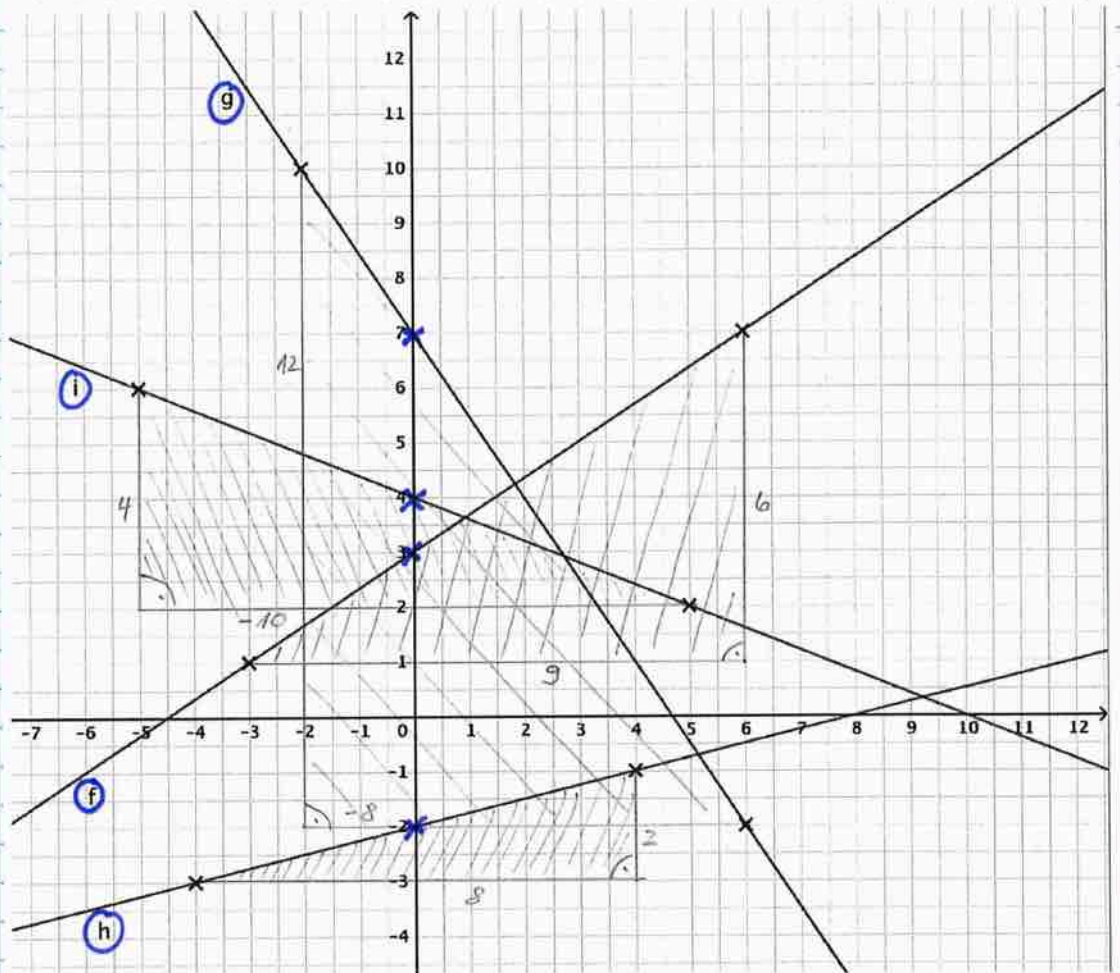
$13 \cdot x = 60 \quad | : 13$

$x = \frac{60}{13}$

$\Rightarrow y_g = \frac{1}{3} \cdot x - 2 = \frac{1}{3} \cdot \frac{60}{13} - 2 = \frac{20}{13} - \frac{26}{13} = -\frac{6}{13}$

$\Rightarrow \underline{\underline{S \left( \frac{60}{13} \mid -\frac{6}{13} \right)}}$

4.



Gerade f : Steigung :  $\frac{2}{3} = \frac{2}{3}$   
 $\Rightarrow \underline{\underline{y = \frac{2}{3} \cdot x + 3}}$

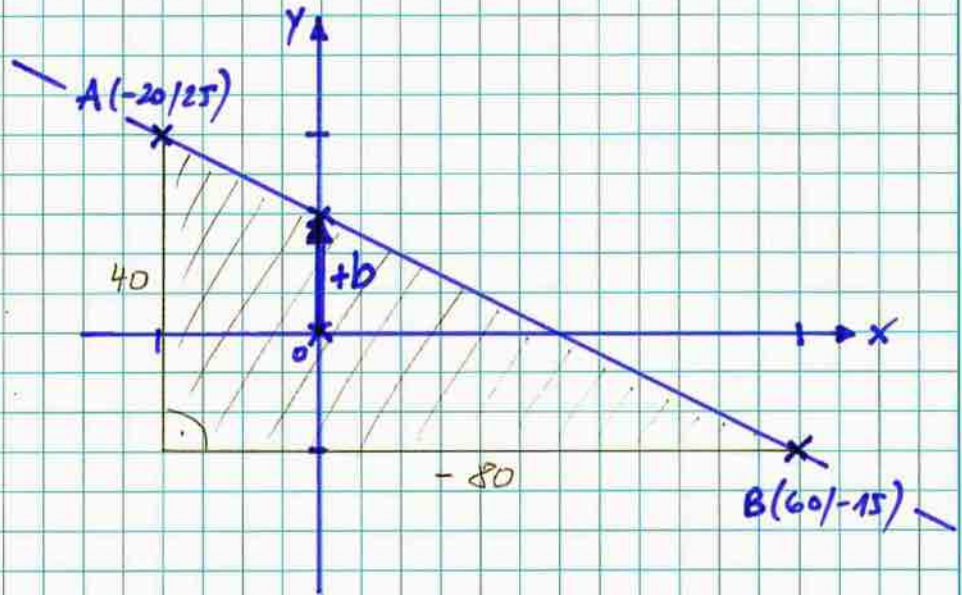
Gerade g : Steigung :  $-\frac{3}{2} = -\frac{3}{2}$   
 $\Rightarrow \underline{\underline{y = -\frac{3}{2} \cdot x + 7}}$

Gerade h : Steigung :  $\frac{1}{4} = \frac{1}{4}$   
 $\Rightarrow \underline{\underline{y = \frac{1}{4} \cdot x - 2}}$

Gerade i : Steigung :  $-\frac{2}{5} = -\frac{2}{5}$   
 $\Rightarrow \underline{\underline{y = -\frac{2}{5} \cdot x + 4}}$

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Skizze:



⇒ Steigung:  $-\frac{40}{80} = -\frac{1}{2}$

→  $y = -\frac{1}{2} \cdot x + b$

⇒ Koordinaten von Punkt A (-20/25)  
einsetzen:

$$25 = -\frac{1}{2} \cdot (-20) + b$$

$$25 = 10 + b$$

↪  $b = 15$

⇒  $y = -\frac{1}{2} \cdot x + 15$