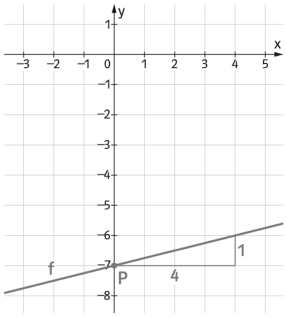
LÖSUNG ZU 936:

a)

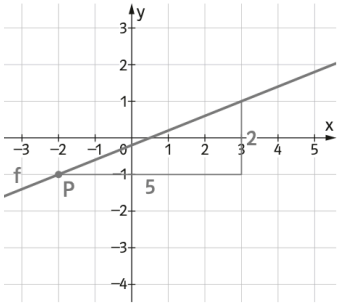
1) 

$k = 25\% = \frac{25}{100} = \frac{1}{4}$

2) Da $P = (0|-7) = (0|d)$ gilt, lautet die Gleichung von f: $f(x) = \frac{1}{4}x - 7$

3) $\tan(\alpha) = \frac{1}{4}$ → $\alpha = \arctan\left(\frac{1}{4}\right) \approx 14{,}04°$

b)

1) 

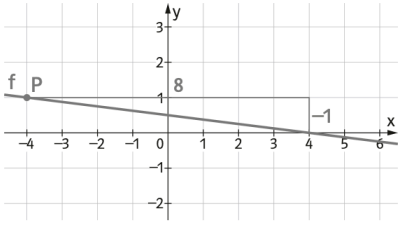
$k = 40\% = \frac{40}{100} = \frac{2}{5}$

2) Da der Punkt P auf dem Graphen von f liegt, gilt: $-1 = -2 \cdot \frac{2}{5} + d$ → $d = -\frac{1}{5}$

$d.h. f(x) = \frac{2}{5}x - \frac{1}{5}$

3) $\tan(\alpha) = \frac{2}{5}$ → $\alpha = \arctan\left(\frac{2}{5}\right) \approx 21{,}80°$

c)

1) 

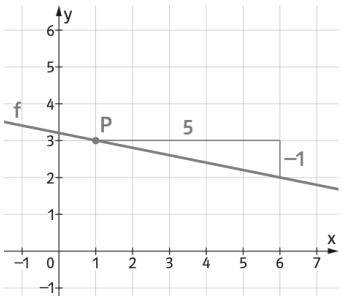
$k = -\frac{12{,}5}{100} - \frac{1}{8}$

2) Da der Punkt P auf dem Graphen von f liegt, gilt: $1 = -4 \cdot \left(-\frac{1}{8}\right) + d$ → $d = \frac{1}{2}$

$d.h. f(x) = -\frac{1}{8}x + \frac{1}{2}$

3) $\tan(\alpha) = -\frac{1}{8}$ → $\alpha = |\arctan\left(-\frac{1}{8}\right)| \approx 7{,}13°$

d)



1) $k = -\frac{20}{100} = -\frac{1}{5}$

2) Da der Punkt P auf dem Graphen von f liegt, gilt: $3 = 1 \cdot \left(-\frac{1}{5}\right) + d$ → $d = \frac{16}{5}$

   $d.h. f(x) = -\frac{1}{5}x + \frac{16}{5}$

3) $\tan(\alpha) = -\frac{1}{5}$ → $\alpha = |\arctan\left(-\frac{1}{5}\right)| \approx 11{,}31°$