

Übungen 5, 8, 9

II/11

5a

$$A [5, -2] \quad P: x - y = 4$$

Wahlort A und P

$$ax + by + c = 0$$

$$[x_0, y_0]$$

$$d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}}$$

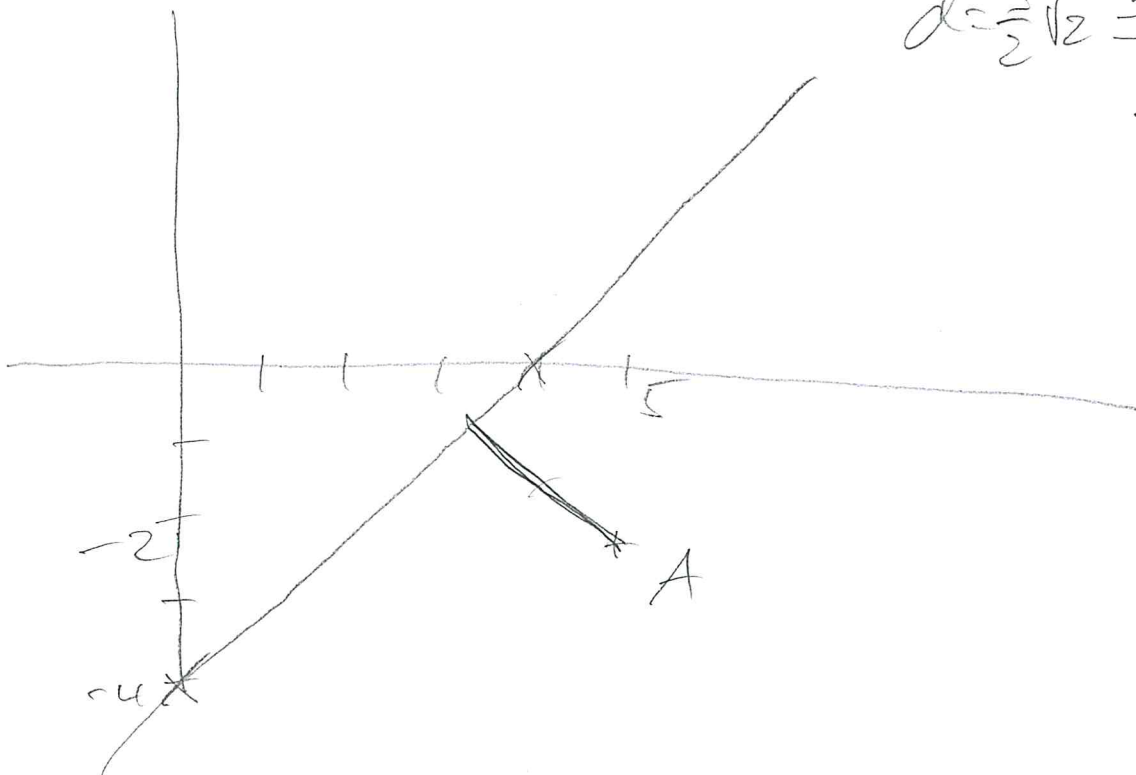
$$x - y - 4 = 0$$

$$1 \cdot x + (-1) \cdot y + (-4) = 0$$

$$\begin{array}{ll} x=0 & y=4 \\ x=4 & y=0 \end{array}$$

$$d = \frac{|5 - (-2) - 4|}{\sqrt{(1)^2 + (-1)^2}} = \frac{3}{\sqrt{2}} = \frac{3}{2} \sqrt{2}$$

$$d = \frac{3}{2} \sqrt{2} = 1.5 \times 1.41 = 2.1$$



8a

$$A [2, 4] \quad B [-2, 0]$$

$$P: \boxed{3x - y = 6}$$

$$x=0$$

$$y = -6$$

$$x=2$$

$$y = 0$$

AB with P

$$x = x_A + t(x_B - x_A)$$

$$y = y_A + t(y_B - y_A)$$

$$B - A = (-2 - 2, 0 - 4) = (-4, -4)$$

$$x = 2 - 4t$$

$$y = 4 - 4t$$

~~do do~~

$$3(2 - 4t) - (4 - 4t) = 6$$

$$\underbrace{6} - \underbrace{12t} - \underbrace{4} + \underbrace{4t} = 6$$

$$-8t = 4$$

$$t = -\frac{1}{2}$$

$$P [4, 6]$$

6

$P[4,6)$

I13

