

Lineare Funktionen

Gegeben sind die Punkte A und B. Berechne m, b und f(x)

Lösung

1) A(0/2) B(1/8) m=___ b=___ f(x) = _____

$$m = \frac{8 - 2}{1 - 0} = \frac{6}{1} = 6 \quad b = 2 - 6 \cdot 0 = 2 \quad f(x) = 6x - 2$$

2) A(0/8) B(3/20) m=___ b=___ f(x) = _____

$$m = \frac{20 - 8}{3 - 0} = \frac{12}{3} = 4 \quad b = 8 - 4 \cdot 0 = 8 \quad f(x) = 4x - 8$$

3) A(3/63) B(5/99) m=___ b=___ f(x) = _____

$$m = \frac{99 - 63}{5 - 3} = \frac{36}{2} = 18 \quad b = 63 - 18 \cdot 3 = 9 \quad f(x) = 18x - 9$$

4) A(1/2) B(2/-7) m=___ b=___ f(x) = _____

$$m = \frac{-7 - 2}{2 - 1} = \frac{-9}{1} = -9 \quad b = 2 - (-9) \cdot 1 = 11 \quad f(x) = -9x - 11$$

5) A(1/-2) B(2/6) m=___ b=___ f(x) = _____

$$m = \frac{6 - (-2)}{2 - 1} = \frac{8}{1} = 8 \quad b = -2 - 8 \cdot 1 = -10 \quad f(x) = 8x - 10$$

6) A(0/-11) B(4/-7) m=___ b=___ f(x) = _____

$$m = \frac{-7 - (-11)}{4 - 0} = \frac{4}{4} = 1 \quad b = -11 - 1 \cdot 0 = -11 \quad f(x) = 1x - 11$$

7) A(4/47) B(1/5) m=___ b=___ f(x) = _____

$$m = \frac{5 - 47}{1 - 4} = \frac{-42}{-3} = 14 \quad b = 47 - 14 \cdot 4 = -9 \quad f(x) = 14x - 9$$

8) A(-2/16) B(2/-8) m=___ b=___ f(x) = _____

$$m = \frac{-8 - 16}{2 - (-2)} = \frac{-24}{4} = -6 \quad b = 16 - (-6) \cdot (-2) = 4 \quad f(x) = -6x + 4$$

9) A(5/37) B(6/46) m=___ b=___ f(x) = _____

$$m = \frac{46 - 37}{6 - 5} = \frac{9}{1} = 9 \quad b = 37 - 9 \cdot 5 = -8 \quad f(x) = 9x - 8$$

10) A(-2/-21) B(3/19) m=___ b=___ f(x) = _____

$$m = \frac{19 - (-21)}{3 - (-2)} = \frac{40}{5} = 8 \quad b = -21 - 8 \cdot (-2) = -5 \quad f(x) = 8x - 5$$

11) A(2/4) B(1/6) m=___ b=___ f(x) = _____

$$m = \frac{6 - 4}{1 - 2} = \frac{2}{-1} = -2 \quad b = 4 - (-2) \cdot 2 = 8 \quad f(x) = -2x + 8$$