**Lineare Gleichungen mit zwei Variablen – Übungen II**

**Forme folgende lineare Gleichungen um und bestimme die zugehörige Funktionsgleichung. Fülle dann die Tabellen aus.**

**a) 2x - 10 = 4y – 2**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **-3** | **-2,5** | **-2** | **-1,5** | **-1** | **-0,5** |

 **y = 0,5x - 2**

**b) 6x + 8y = 24 - 2x**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **5** | **4** | **3** | **2** | **1** | **0** |

 **y = -x + 3**

**c) 5 (x + y) = x – y**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | $\frac{4}{3}$ | $\frac{2}{3}$ | **0** | **-**$\frac{2}{3}$ | **-**$\frac{4}{3}$ | **-4** |

 **y = -**$\frac{2}{3}$**x**

**d) 6 (x - y) = 12 (y + x)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | $\frac{2}{3}$ | $\frac{1}{3}$ | **0** | **-**$\frac{1}{3}$ | **-**$\frac{2}{3}$ | **-2** |

 **y = -**$\frac{1}{3}$**x**

**e) 5 (x + 2y - 2) = 2 (-x - 5y - 4)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **0,6** | **0,25** | **-0,1** | **-0,45** | **-0,8** | **-1,15** |

 **y = -**$\frac{7}{20}$**x – 0,1**

**f) 3 (4y - 1,5x) = 1,2**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **-0,65** | **-0,275** | **0,1** | **0,475** | **0,85** | **1,225** |

 **y =** $\frac{3}{8}$**x + 0,1**

**g) (x - 2) : (y + 4) = 12 : 8**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **-7**$\frac{2}{3}$ | **-6** | **-5**$\frac{1}{3}$ | **-4**$\frac{2}{3}$ | **-3** | **-3**$\frac{1}{3}$ |

 **y =** $\frac{2}{3}$**x - 5**$\frac{1}{3}$

**h) (3x + 1) : (3y + 5) = 4 : 5**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | **-2** | **-1** | **0** | **1** | **2** | **3** |
| **y** | **-3,75** | **-2,5** | **-1,25** | **0** | **1,25** | **2,5** |

 **y = 1,25x – 1,25**

**Zeichne die zugehörigen Graphen:**

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