Englische Übungen zu Wachstums- und Abnahmeprozesse

1. There are 5 miles to 8 kilometres.

a. Fill in the table.
b. Work out the ratio miles : kilometer for each pair of values in the table. What do you notice?
c. Is the number of kilometres directly proportional to the number of miles? Explain.
d. Draw the graph of this data. Put miles on the horizontal axis. Is it a straight line?

Miles	Kilometres
5	8
10	
15	
20	
25	

e. Find a formula for kilometres (y) depending on the variable miles (x).
f. How many kilometeres are
   1) 45 miles,
   2) 105 miles?

2. The two variables x and y are inversely proportional.

(1| _____), (2|12), (3|8), (4|_____), (_____| 4)

a. Calculate the missing values.
b. Calculate the proportionality constant.
c. Plot the curve.

3. Ann saved 5000 € at an interest rate of 4.5 %.

a. Calculate the principal after four year. Don't forget about the dividend tax of 25 %.
b. How much is the interest (minus taxes) after four years?
c. After the four years, Ann decides to add 2500 €. Calculate the principal after another two years (new interest rate: 2 %).

Vocabulary

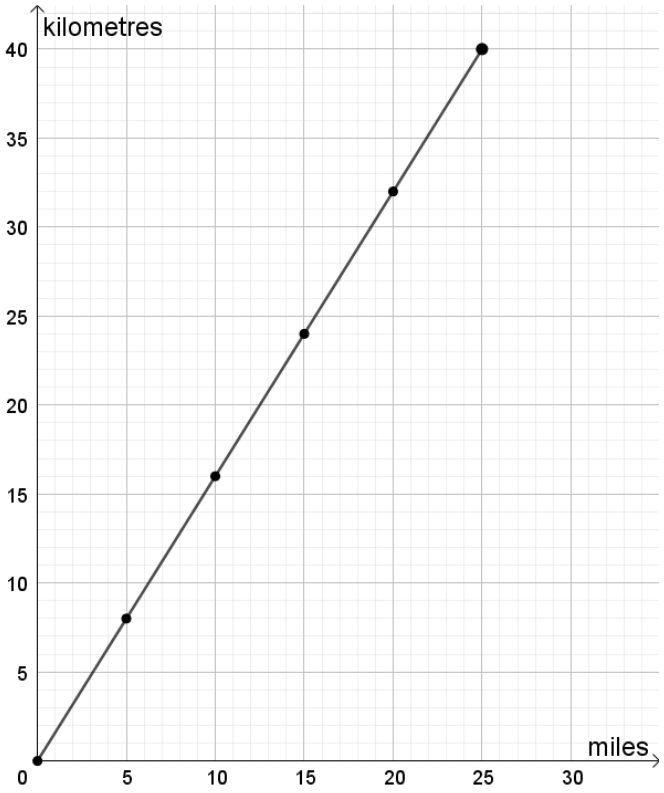
Englisch	Deutsch
ratio	Verhältnis
value	Wert
directly proportional	direkt proportional
horizontal axis	horizontale Achse (x-Achse)
depending on	abhängig von
interest rate	Zinssatz
principal	Kapitel
dividend tax	KESt.

Solutions

1.

a.

Miles	Kilometres
5	8
10	16
15	24
20	32
25	40



b. m : k = 5 : 8; The ratio is always the same.

c. Yes, because the quotient „kilometres divided by miles“ is constant.

d. Compare the graph. Choose e.g. 1 miles ≙ 2mm, 1 km ≙1 mm

e. y = 1.6x

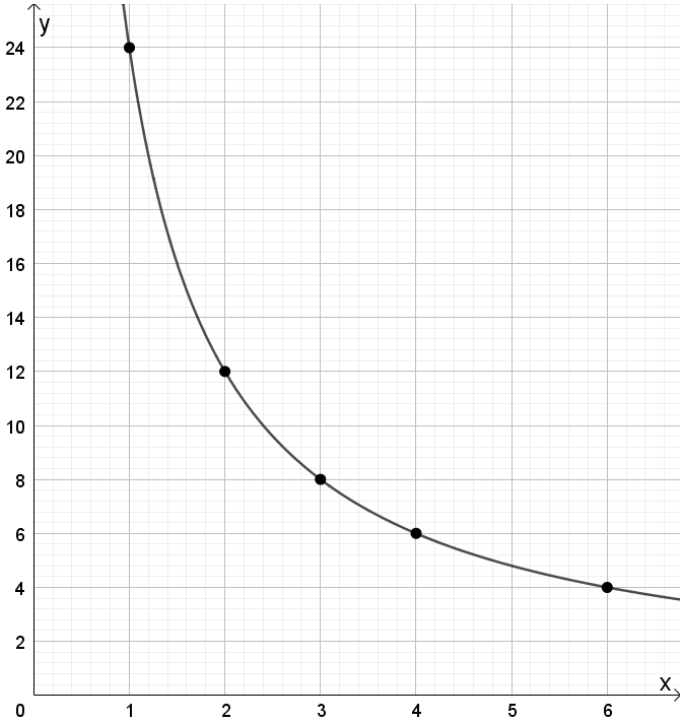
f.
1) 72 km
2) 168 km

2.

a. (1| 24), (2|12), (3|8), (4|6), (6|4)

b. The proportionality constant k is 24.

c. Choose e.g. x-axis: 1 ≙ 1 cm, y-axis: 1 ≙ 2 cm



3.

a. 6101,87 €
b. 1101,87 €
c. 8861,86 €