



Englische Übungen zu Wachstums- und Abnahmeprozesse

1. There are 5 miles to 8 kilometres.

- Fill in the table.
- Work out the ratio miles : kilometer for each pair of values in the table. What do you notice?
- Is the number of kilometres directly proportional to the number of miles? Explain.
- Draw the graph of this data. Put miles on the horizontal axis. Is it a straight line?
- Find a formula for kilometres (y) depending on the variable miles (x).
- How many kilometers are
 - 45 miles,
 - 105 miles?

Miles	Kilometres
5	8
10	
15	
20	
25	





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

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

- Calculate the missing values.
- Calculate the proportionality constant.
- Plot the curve.

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

- Calculate the principal after four year. Don't forget about the dividend tax of 25 %.
- How much is the interest (minus taxes) after four years?
- 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	KES _t .





Solutions

1.

a.

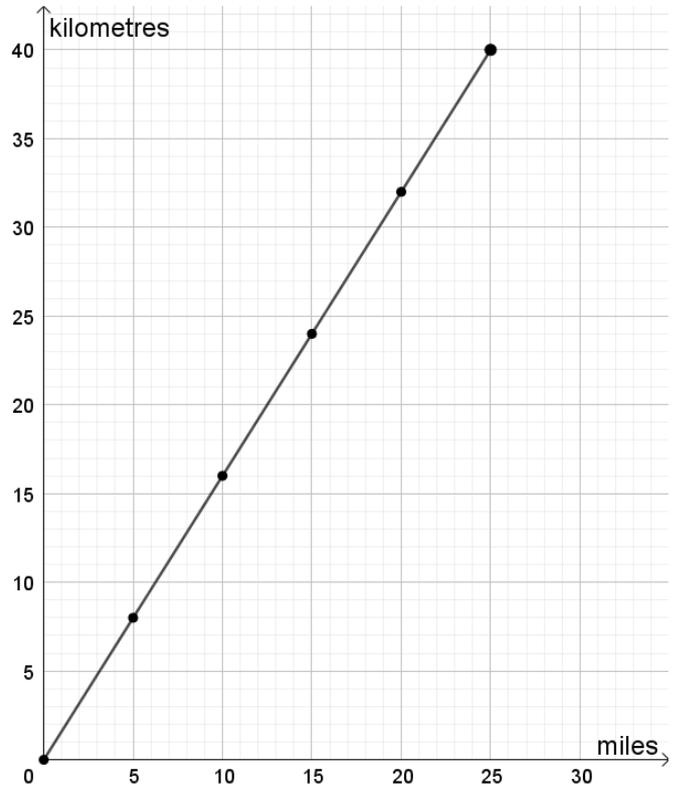
Miles	Kilometres
5	8
10	16
15	24
20	32
25	40

- 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 \triangleq 2mm, 1 km \triangleq 1 mm

e. $y = 1.6x$

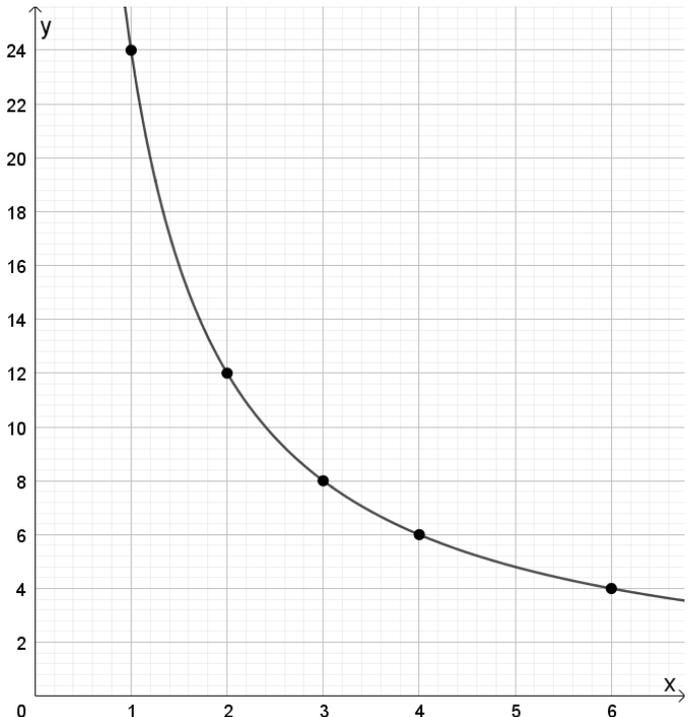
f.

- 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 \triangleq 1 cm, y-axis: 1 \triangleq 2 cm



3.

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

