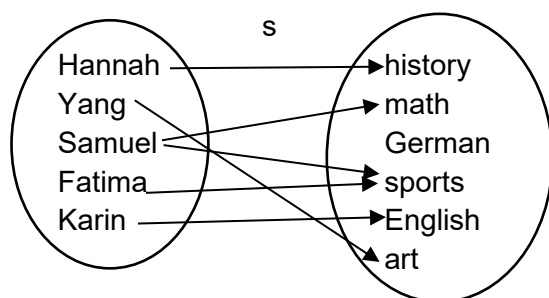




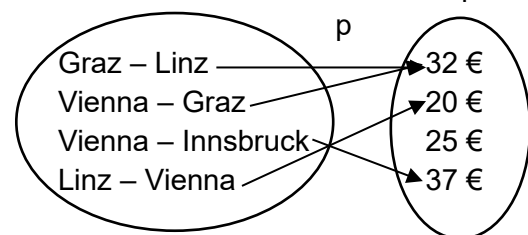
Englische Übungen zu Funktionen

1. Are the following allocations functions? Explain why or why not.

a. students favourite subject



b. travel route ticket price



2. The following table show the size of a baby in the first six months after birth. Draw the graph in a coordinate system showing size depending on age. First mark the points then connect them to a continuous line.

months	0	1	2	3	4	5	6
Size (cm)	49	54	57	60	62	64	66





3. Draw the graph of the functions into the same coordinate system and compare them.
How does y change with increasing x ?
Is y positive or negative, when 1) $x = 0$ or 2) $x = -10$?
- $f: y = x$ and $g: y = -x$
 - $h: y = 2x$ and $i: y = -2x$

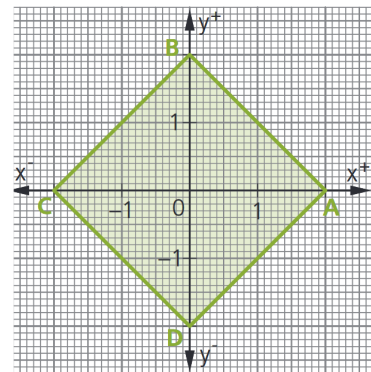
4. Check the true statements.

- The graph of $y = 2x - 3$ has a steeper slope than the graph of $y = x + 4$.
- The graph of $y = x + 2$ crosses the x -axis at $(0|2)$.
- The graph of $y = -2$ is a horizontal line.
- The graph of $y = \frac{x}{2} + 4$ has a steeper slope than the graph of $y = 2x + 3$.

5. The diagram shows a square with vertices A, B, C and D. Match the correct line to each equation.
One is done for you.

1	Line through C and D	
2	Line through A and C	A
3	Line through A and D	
4	Line through B and C	
5	Line through A and B	

A	$y = 0$
B	$y = -x + 2$
C	$y = x + 2$
D	$y = -x - 2$
E	$y = x - 2$





6. Complete the lookup table of the quadratic function $y = x^2 - 2x$. Draw the pairs of values from the table in a coordinate system and connect them to a parabola.

x	-2	-1	0	1	2	3	4
y	8						

Vocabulary

Englisch	Deutsch
allocation	Zuordnung
function	Funktion
continuous line	durchgehende Linie
statement	Aussage
steep	steil
slope	Anstieg, Steigung
to cross	schneiden
lookup table	Wertetabelle
pair of values	Wertepaar
parabola	Parabel



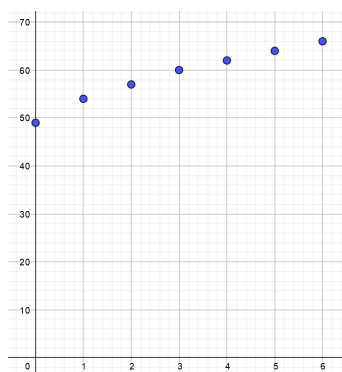


Solutions

1.

- a. This is not a function because Samuel has two favourite subjects (maths and sports).
- b. This is a function since each route is matched with exactly one price.

2.



3.

- a. For f: the value of y increases with x , y is zero (neither positive nor negative) for $x = 0$, y is negative for $x = -10$.
For g: the value of y decreases with x , y is zero (neither positive nor negative) for $x = 0$, y is positive for $x = -10$.
- b. For h: the value of y increases with x , y is zero (neither positive nor negative) for $x = 0$, y is negative for $x = -10$.
For i: the value of y decreases with x , y is zero (neither positive nor negative) for $x = 0$, y is positive for $x = -10$.

4. A

5. 1D, 2A, 3E, 4C, 5B

6.

x	-2	-1	0	1	2	3	4
y	8	3	0	-1	0	3	8

