

Q001

Question: Which of the following representations is a function?

Correct answer: Graph A

Wrong answer 1: Graph B

Wrong answer 2: Graph C

Wrong answer 3: Graph D

Learning goal section: 1.1

Feedback:

Q002

Question: Which kind of function is represented in the table ?

Correct answer: Quadratic

Wrong answer 1: Linear

Wrong answer 2: Exponential

Wrong answer 3: Hyperbolic

Learning goal section: 1.1

Feedback:

Q003

Question: What kind of function corresponds to the graph?

Correct answer: Exponential

Wrong answer 1: Quadratic

Wrong answer 2: Linear

Wrong answer 3: Hyperbolic

Learning goal section: 1.1

Feedback:

Q004

Question: Which of the following formulas matches with a linear function?

Correct answer: $y = ax + b$

Wrong answer 1: $y = x^2 + b$

Wrong answer 2:

Wrong answer 3: $y = -4x^2 + b$

Learning goal section: 1.1

Feedback:

Q005

Question: Which of the following formulas matches with an increasing linear function?

Correct answer: $y = 4x + 3$

Wrong answer 1: $y = -4x + 3$

Wrong answer 2: $y = -4x - 3$

Wrong answer 3: $y = -4x$

Learning goal section: 1.3

Feedback: $y = 4x + 3$ is correct because the sign of the slope (number before the x) is positive

Q006

Question: Which of the following formulas matches with a decreasing linear function?

Correct answer: $y = -9x + 1$

Wrong answer 1: $y = 9x - 1$

Wrong answer 2: $y = 9x + 1$

Wrong answer 3: $y = 9x$

Learning goal section: 1.3

Feedback: $y = -9x + 1$ is correct because the sign of the slope (number before the x) is negative

Q007

Question: What value goes in the green space ?

Correct answer: 16

Wrong answer 1: 14

Wrong answer 2: 18

Wrong answer 3: None of them

Learning goal section: 1.1

Feedback: Value 16 is correct. The rate of change is constant and equal to 3 (difference between the y -values -2 and -11 divided by the difference between the correspondent x -values 1 and -4). The difference between the x -values 5 and -1 is 6 and because the rate is 3 you know that the difference between their correspondent y -values must be 3 times their difference ($3 \times 6 = 18$). To calculate the y -value for $x=5$ you add 18 to the y -value for $x=-1$. That is $-2 + 18 = 16$.

Image:

x	-4	-2	-1	5
$f(x)$	-11		-2	

Q008

Question: A 60-gallon tank is initially full of water and being drained at a constant rate of 9 gallons per minute. Write a formula that models the number of gallons of water in the tank after x minutes.

Correct answer: $y=9x+60$

Wrong answer 1: $y=(1/9)x+60$

Wrong answer 2: $y=-9x+60$

Wrong answer 3: None of them

Learning goal section: 3.5

Feedback: $y=9x+60$ is correct because the rate of change is 9 and the y -intercept is 60 (at $x=0$ minutes there was $y=60$ gallon water).

Q009

Question: When x is multiplied by 3

Correct answer: then y will be multiplied by 6. Which of the following graphs represents this statement?

Wrong answer 1: Graph B

Wrong answer 2: Graph C

Wrong answer 3: Graph A

Learning goal section: 1.1

Feedback: Q009_image1

Q010

Question: Given the table. Which is the corresponding formula?

Correct answer: $y=6x$

Wrong answer 1: $y=-6x$

Wrong answer 2: $y=6$

Wrong answer 3: $y=6x+1$

Learning goal section: 2.3

Feedback: $y=6x$ is correct. The rate of change is constant and equal to 6 (difference between the y -values 30 and 12 divided by the difference between the correspondent x -values 5 and 3).

Image:

x	-2	3	5
y	-12	18	30

Q011

Question: A good grows evenly (linear). At 12 o'clock there is 10 kg

Correct answer: at 20 o'clock there is 34 kg. What is the quantity at 16 o'clock?

Wrong answer 1: 22kg

Wrong answer 2: 30kg

Wrong answer 3: 14kg

Learning goal section: 3.5

Feedback:

Q012

Question: What is the equation of this line?

Correct answer: $y=3$

Wrong answer 1: $x=3$

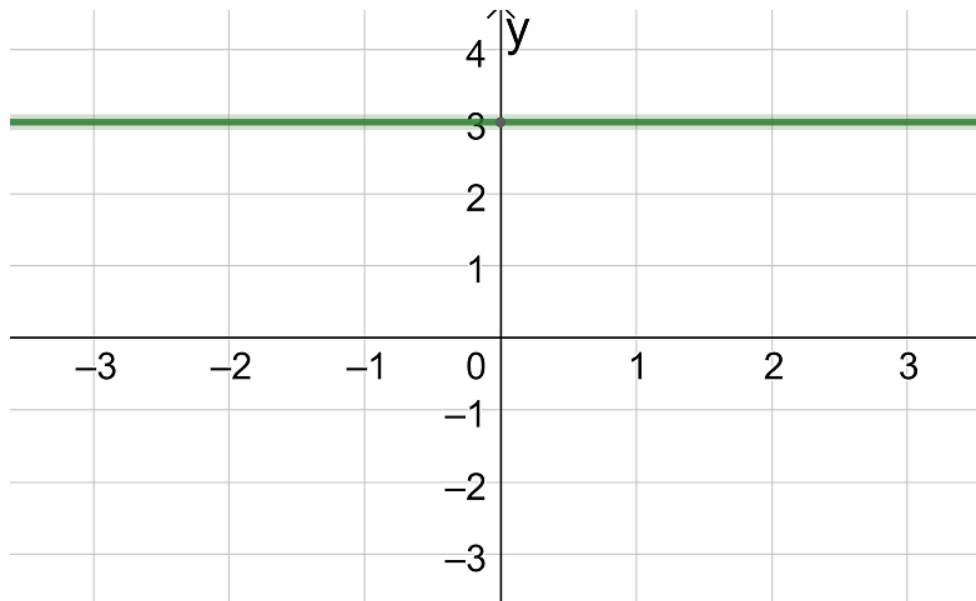
Wrong answer 2: $x=3y$

Wrong answer 3: $y=3x$

Learning goal section: 3.3

Feedback: $y=3$ is correct. For each x -value the correspondent y -value is 3. In other words the rate of change is constant and equal to zero and the y -intercept is 3.

Image:



Q013

Question: Drawn are four straight lines. Which formula corresponds to line D?

Correct answer: $y = -x$

Wrong answer 1: $75x - 4$

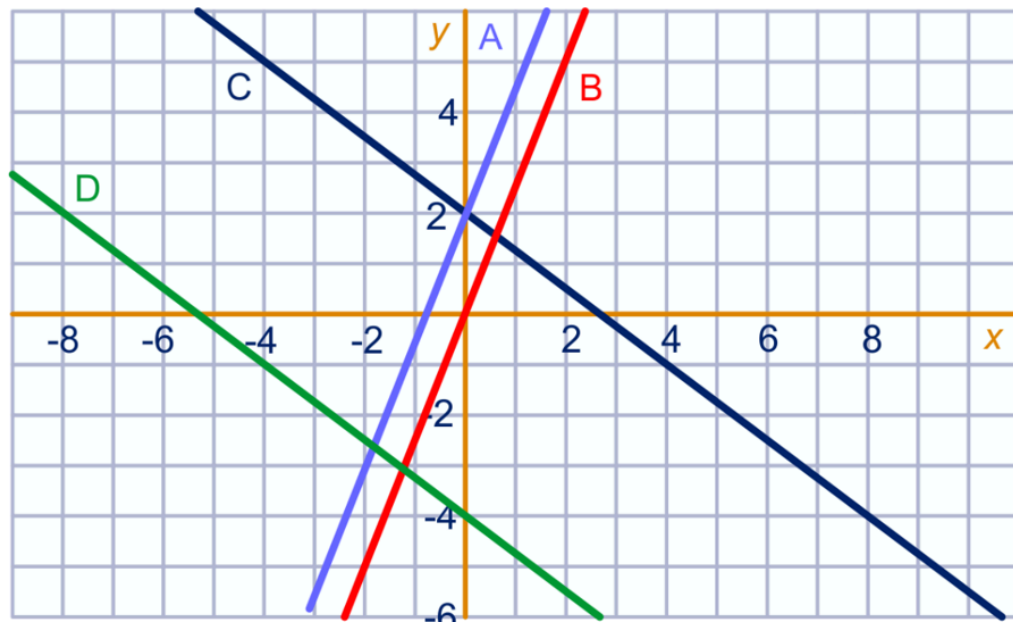
Wrong answer 2: $y = 4 - x$

Wrong answer 3: $75x$

Learning goal section: 2.4

Feedback: G2

Image:



Q014

Question: Drawn are four straight lines. Which graph corresponds to the formula $y = 2 - 0.75x$

Correct answer: Line C

Wrong answer 1: Line A

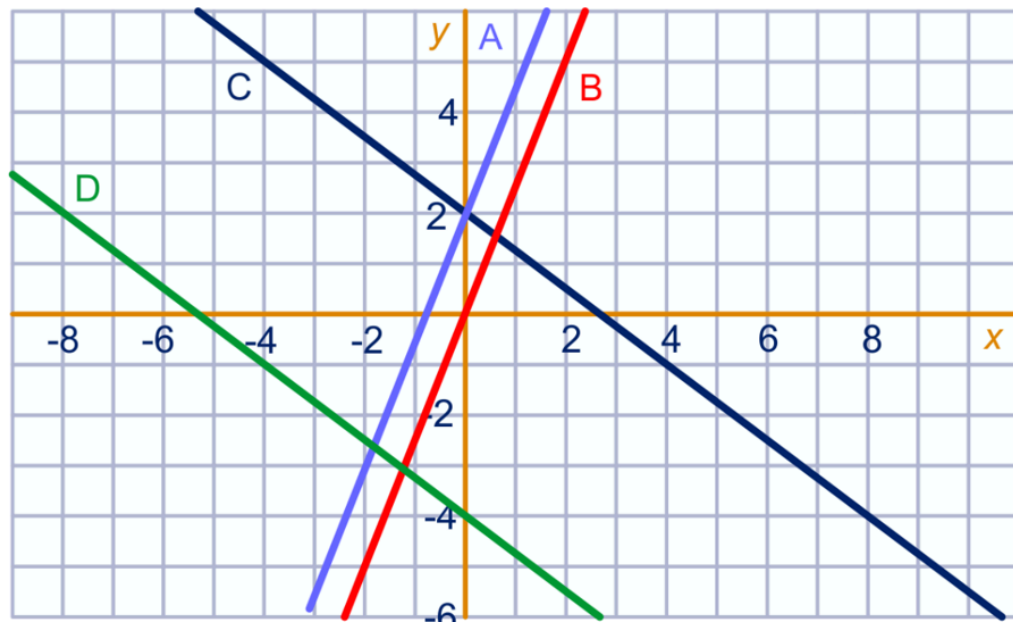
Wrong answer 2: Line B

Wrong answer 3: Line D

Learning goal section: 2.4

Feedback: Q013_image1

Image:



Q015

Question: What is the equation of this line?

Correct answer: $x = -2$

Wrong answer 1: $x = -2y$

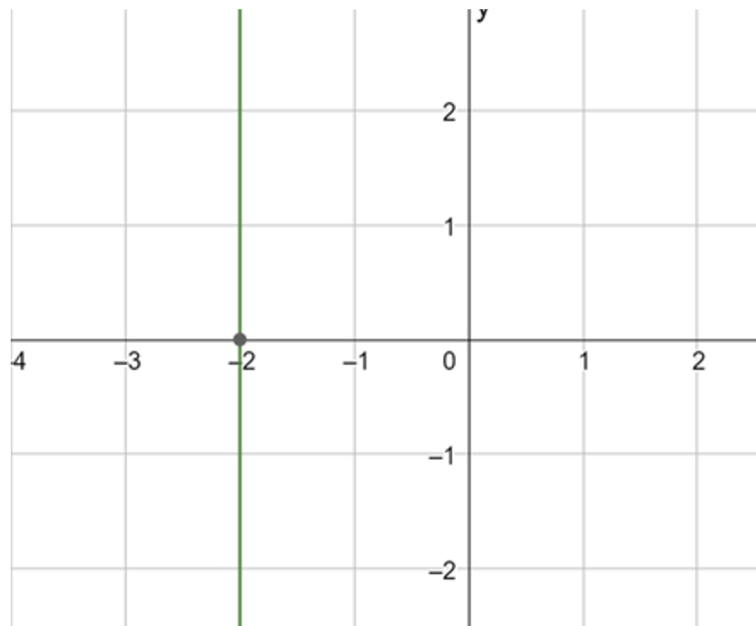
Wrong answer 2: $x = -2y$

Wrong answer 3: $y = -2$

Learning goal section: 3.3

Feedback: $x = -2$ is correct because the line is vertical and goes through the point $(-2$

Image:



Q016

Question: Given the formulas $y=ax$ and $y=ax+5$ for a certain number a . How do their slopes compare to each other?

Correct answer: They have the same steep

Wrong answer 1: they have the same steep but different magnitude

Wrong answer 2: they have different steep and equal magnitude

Wrong answer 3: They have different steep and magnitude

Learning goal section: 2.6

Feedback: They have the same slope because both formulas have 'a' before the x.

Q017

Question: Given the formulas $y=ax$ and $y=ax+3$ for a certain number a . What do you know about the rate of change?

Correct answer: It is the same

Wrong answer 1: it is different

Wrong answer 2: it is not possible to know

Wrong answer 3: I don't know

Learning goal section: 2.6

Feedback: It is the same because both formulas have 'a' as slope.

Q018

Question: See the road from A to H. What is the slope of the line segment CD?

Correct answer: equal to 1

Wrong answer 1: less than 1

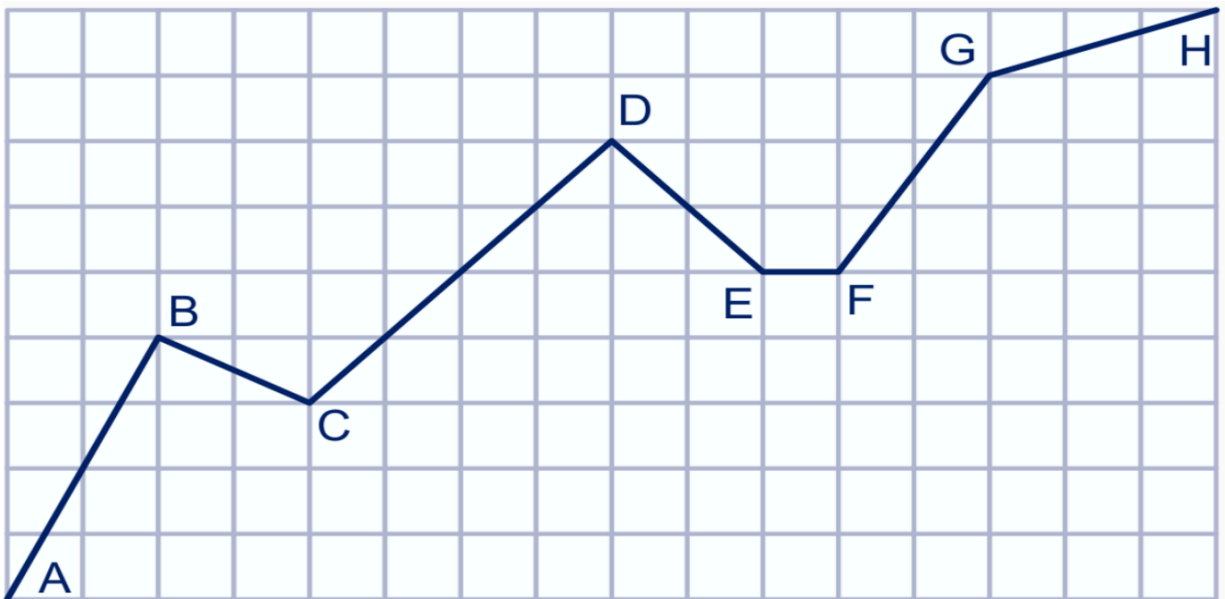
Wrong answer 2: greater than 1

Wrong answer 3: I don't know

Learning goal section: 1.4

Feedback: equal to 1 is correct. The slope is equal to the difference between the y-values divided by the difference between the correspondent x-values (for instance $4:4=1$)

Image:



Q019

Question: Which of the following rules

Correct answer: F

Wrong answer 1: G or H is not a function?

Wrong answer 2: H links a person to her/his grandfather

Wrong answer 3: G links a person to her/his mother.

Learning goal section: 1.1

Feedback: x

Q020

Question: Using the given point

Correct answer: which equation is NOT the equation of this straight line?

Wrong answer 1: $y - 1 = -2x$

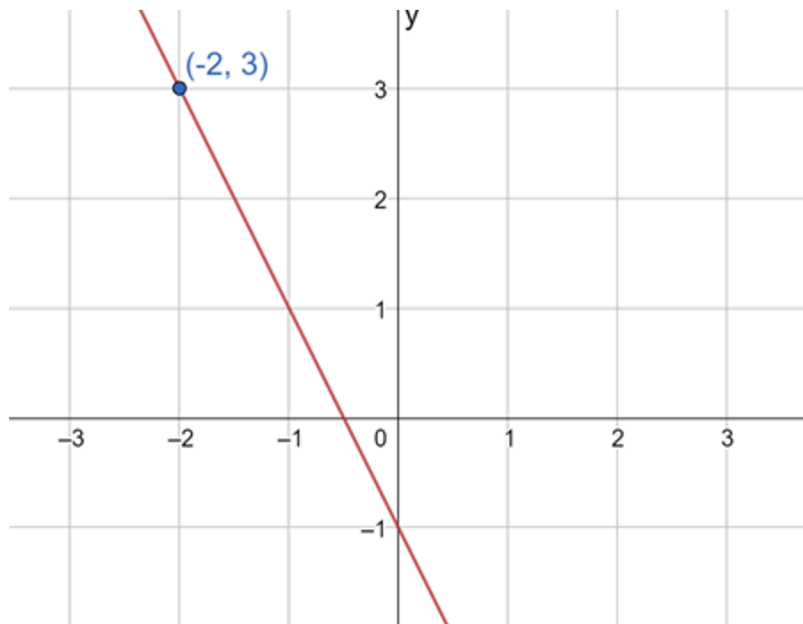
Wrong answer 2: $2y = -4x -$

Wrong answer 3: $y + 1 = -2x$

Learning goal section: 3.2

Feedback: G4

Image:



Q021

Question: What is the equation of the line that is parallel to line s?

Correct answer: " $y = -3x - 2$ "

Wrong answer 1: " $y = -4x + 1$ "

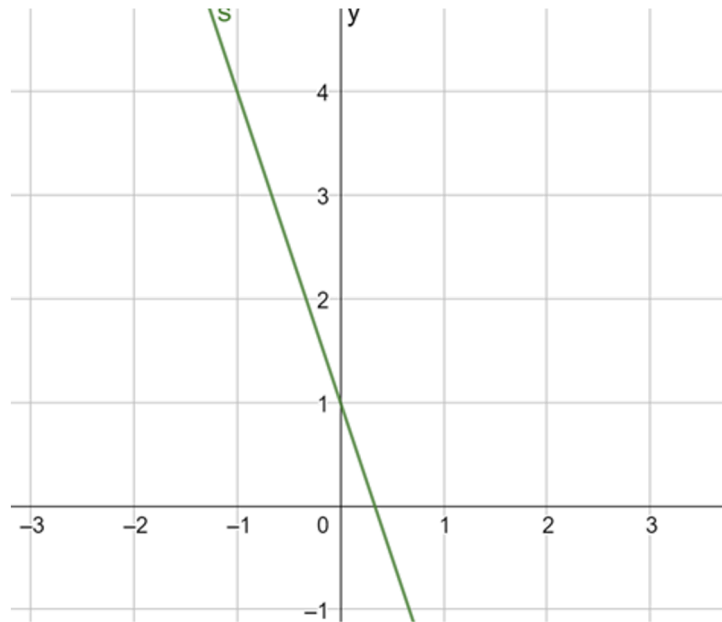
Wrong answer 2: " $y = 3x + 1$ "

Wrong answer 3: " $y = \frac{1}{3}x - 2$ "

Learning goal section: 3.1

Feedback: $y = -3x - 2$ is correct because its slope is equal (slope is -3)

Image:



Q022

Question: What is the equation of the line that is perpendicular to line r ?

Correct answer: $y = -0$

Wrong answer 1: $5x + 1$

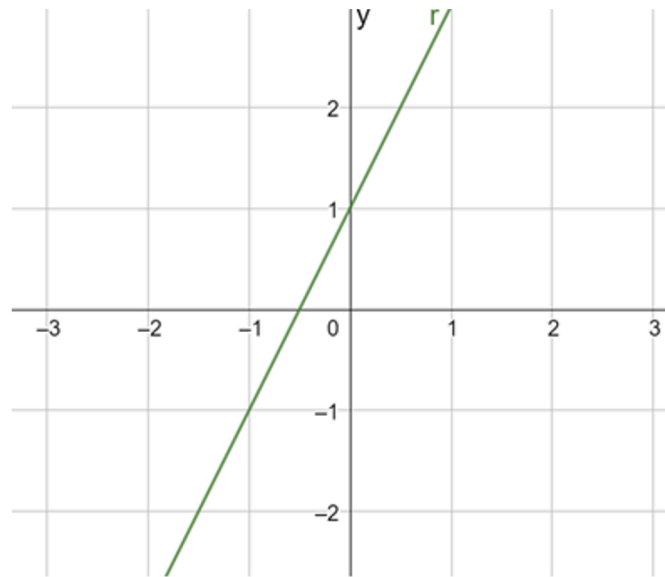
Wrong answer 2: $y = -2x + 1$

Wrong answer 3: $y = 2x - 2$

Learning goal section: 3.1

Feedback: G4

Image:



Q023

Question: Which lines are parallel? A: $y = 2x + 3$. B: $y = 2x - 5$. C: $y = -2x +$

Correct answer: A & B

Wrong answer 1: B & C

Wrong answer 2: A & C

Wrong answer 3: A & B & C

Learning goal section: 3.1

Feedback: A & B have equal slope 2

Q024

Question: "What is the equation of the line: perpendicular to the line $y = \frac{1}{2}x - 7$ and passing through the point (3

Correct answer: -4)?"

Wrong answer 1: $y = -2x + 2$

Wrong answer 2: $y = \frac{1}{2}x -$

Wrong answer 3: $y = 2x -$

Learning goal section: 2.8

Feedback:

Q025

Question: "What is the equation of the line: parallel to the line $y = -\frac{1}{4}x + 5$ and passing through the point (2

Correct answer: -1)"

Wrong answer 1: $y = -\frac{1}{4}x$ ❖

Wrong answer 2: $y = \frac{1}{4}x -$

Wrong answer 3: $y = 4x -$

Learning goal section: 2.8

Feedback:

Q026

Question: Which function's graph is the steepest

Correct answer: Function 1

Wrong answer 1: Function 2

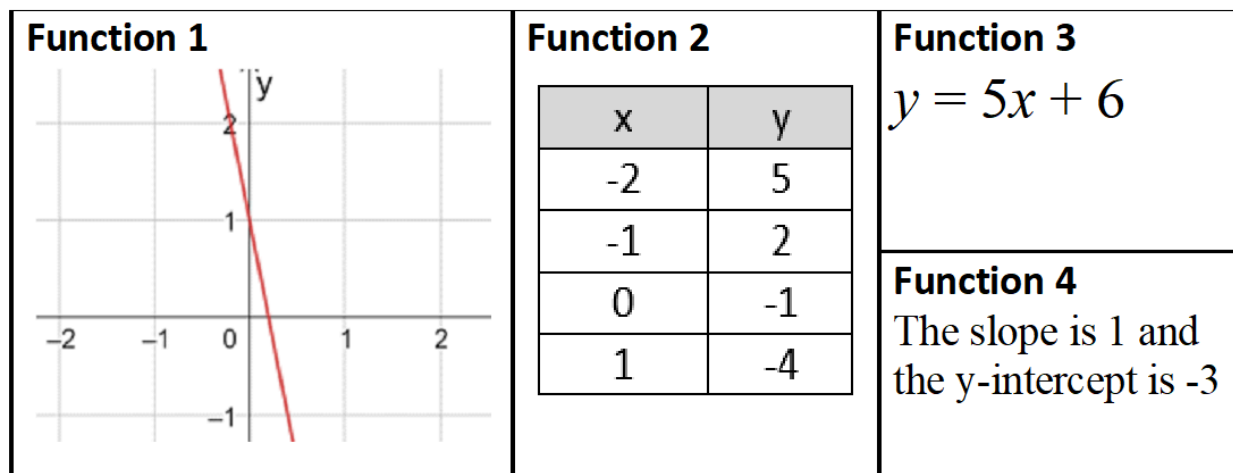
Wrong answer 2: Function 3

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 1 is correct because the slope has the highest magnitude (or value)

Image:



Q027

Question: Which functions have graphs with slopes greater than -4?

Correct answer: functions 2; 3 and 4

Wrong answer 1: functions 1; 2 and 3

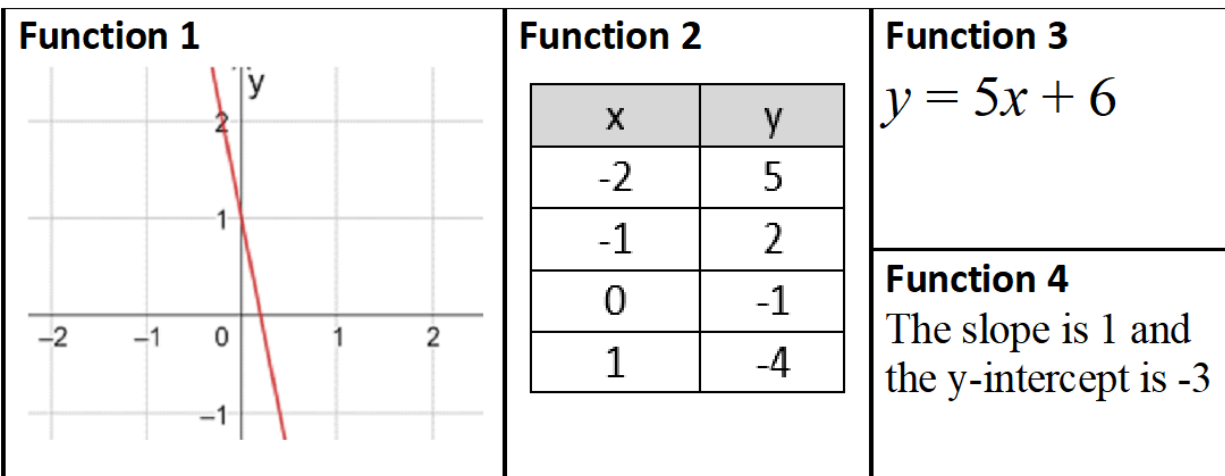
Wrong answer 2: function 1; 2 and 4

Wrong answer 3: Function 1; 3 and 4

Learning goal section: 2.7

Feedback: functions 2; 3 and 4 is the correct option

Image:



Q028

Question: Which function has the graph with a y-intercept farthest from 0?

Correct answer: Function 3

Wrong answer 1: Function 1

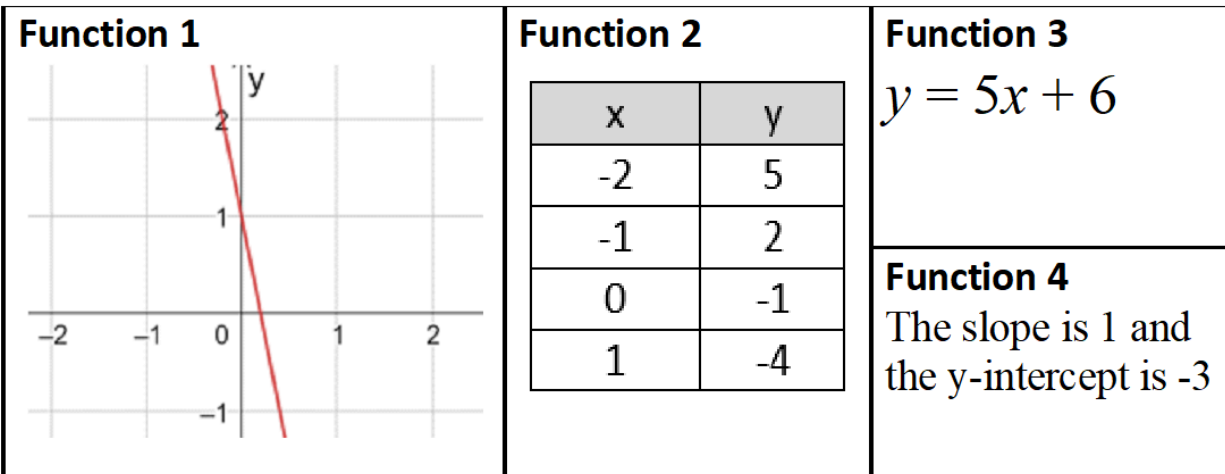
Wrong answer 2: Function 2

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 3 is correct

Image:



Q029

Question: Which function's graph is the steepest

Correct answer: Function 1

Wrong answer 1: Function 2

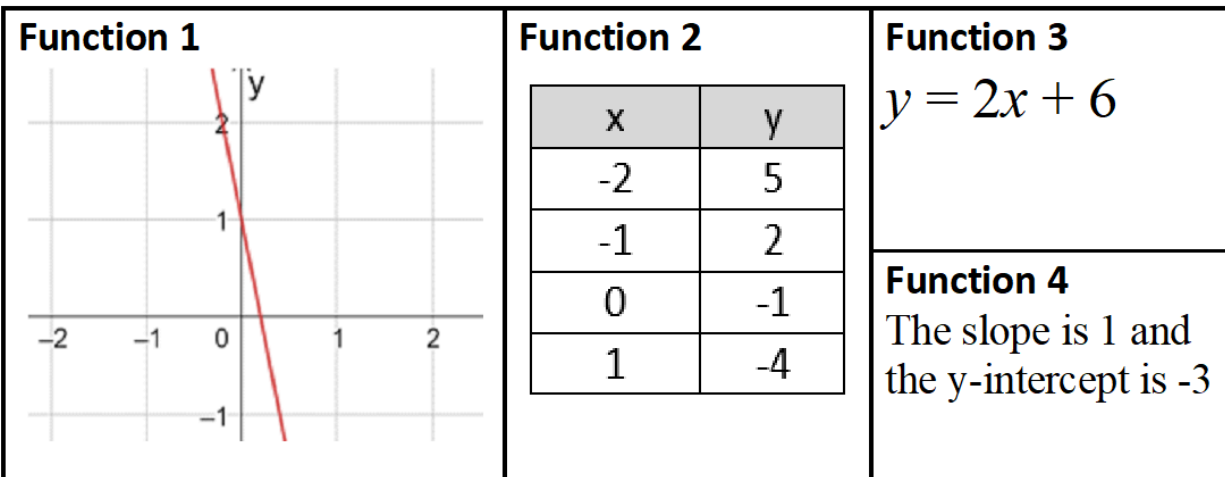
Wrong answer 2: Function 3

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 1 is correct because the slope has the highest magnitude (or value)

Image:



Q030

Question: Which functions have graphs with slopes smaller than or equal to 1?

Correct answer: functions 1; 2 and 4

Wrong answer 1: Functions 1; 3 and 4

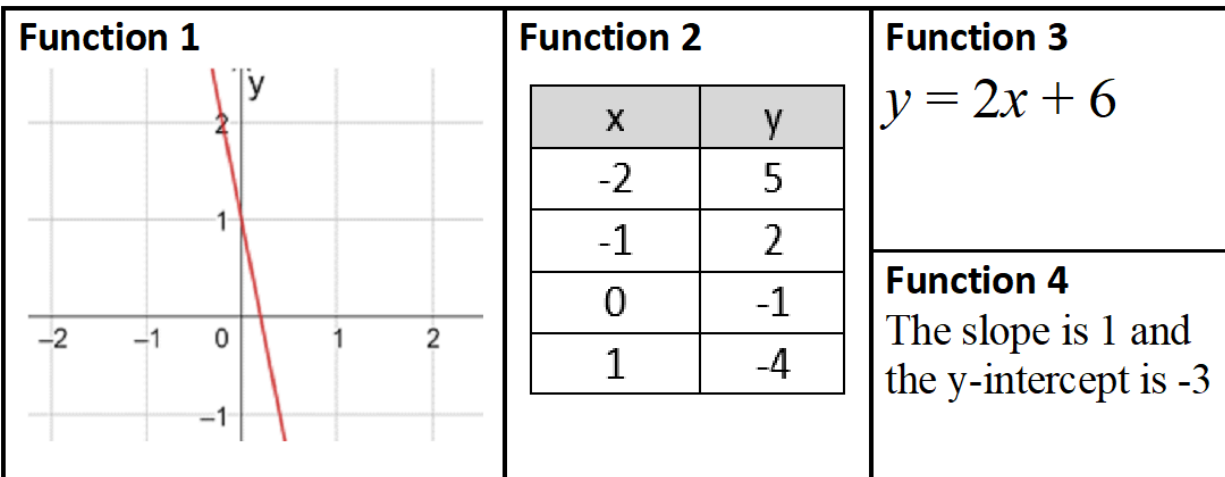
Wrong answer 2: function 1; 2 and 3

Wrong answer 3: functions 2; 3 and 4

Learning goal section: 2.7

Feedback: functions 1; 2 and 4 is the correct option

Image:



Q031

Question: Which function has the graph with a y-intercept farthest from 0?

Correct answer: Function 3

Wrong answer 1: Function 1

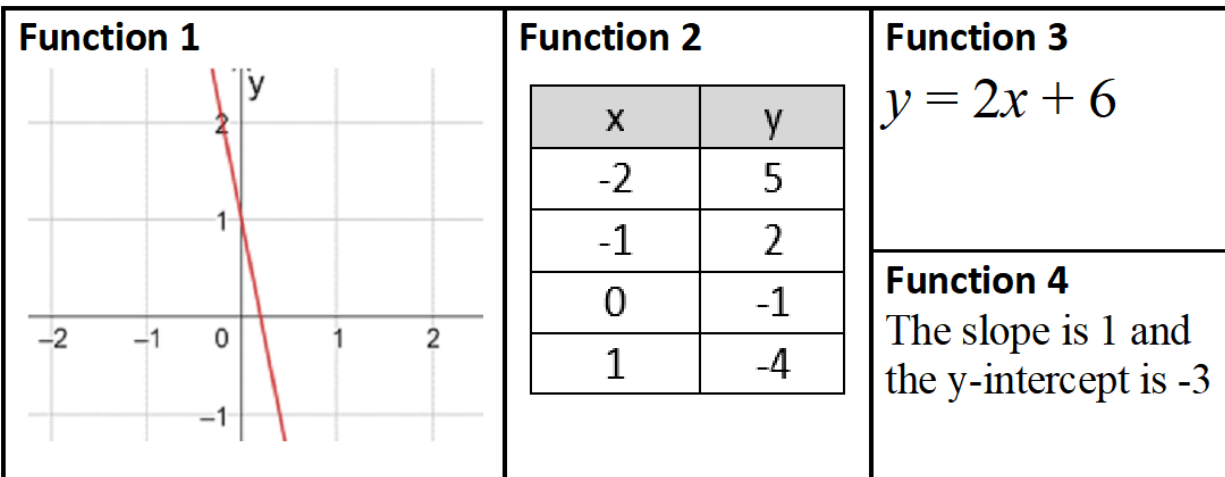
Wrong answer 2: Function 2

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 3 is correct

Image:



Q032

Question: Which function's graph is the steepest

Correct answer: Function 2

Wrong answer 1: Function 1

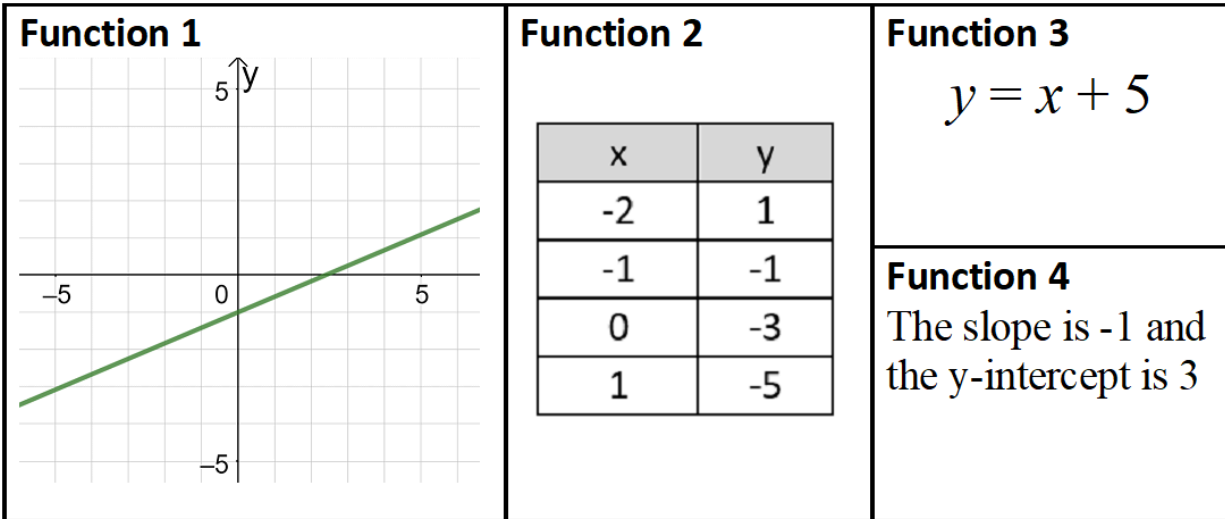
Wrong answer 2: Function 3

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 2 is correct because the slope has the highest magnitude (or value)

Image:



Q033

Question: Which functions have graphs with slopes smaller than 1?

Correct answer: functions 1; 2 and 4

Wrong answer 1: Functions 1; 3 and 4

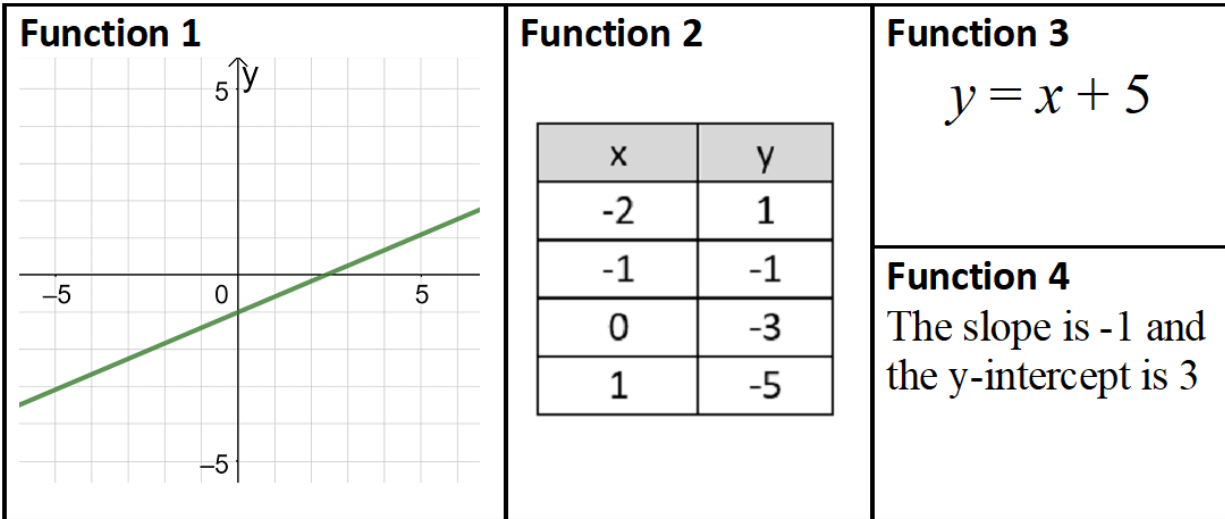
Wrong answer 2: function 1; 2 and 3

Wrong answer 3: functions 2; 3 and 4

Learning goal section: 2.7

Feedback: functions 1; 2 and 4 is the correct option

Image:



Q034

Question: Which function has the graph with a y-intercept farthest from 0?

Correct answer: Function 3

Wrong answer 1: Function 1

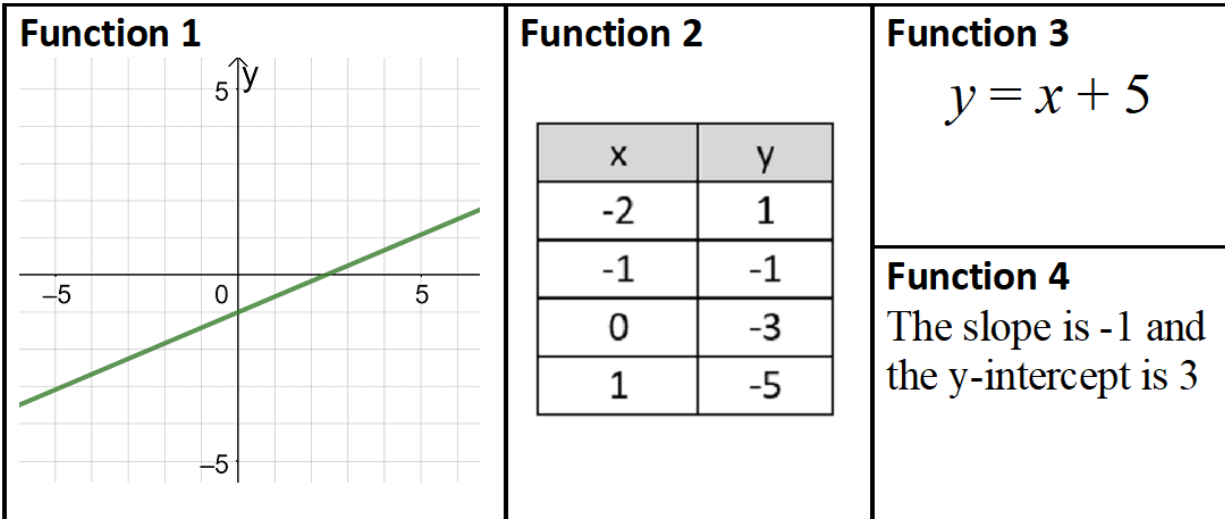
Wrong answer 2: Function 2

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 3 is correct

Image:



Q035

Question: Which function's graph is the steepest

Correct answer: Function 2

Wrong answer 1: Function 1

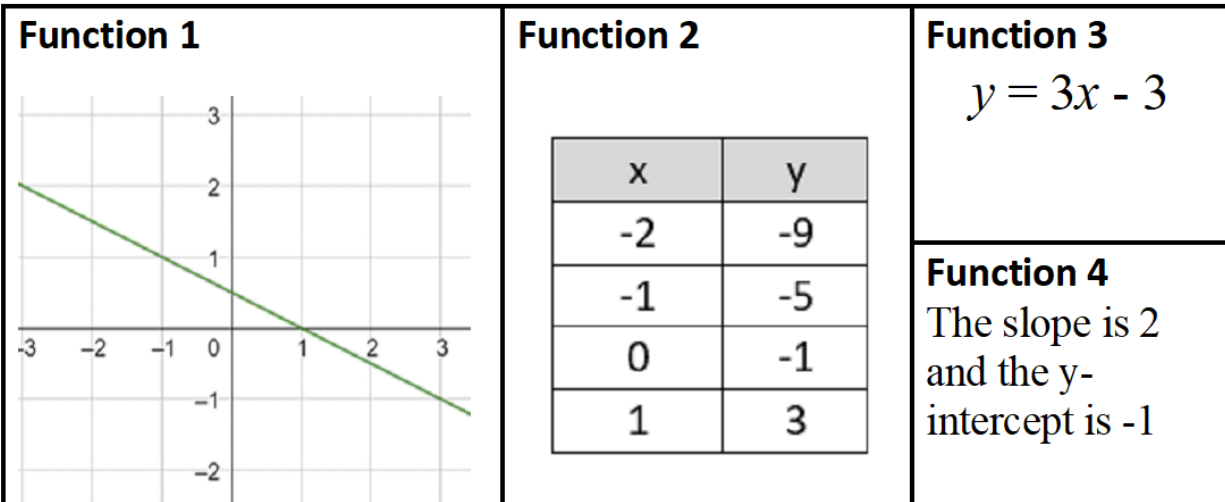
Wrong answer 2: Function 3

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 2 is correct because the slope has the highest magnitude (or value)

Image:



Q036

Question: Which functions have graphs with slopes greater than or equal to 2

Correct answer: functions 2; 3 and 4

Wrong answer 1: Functions 1; 3 and 4

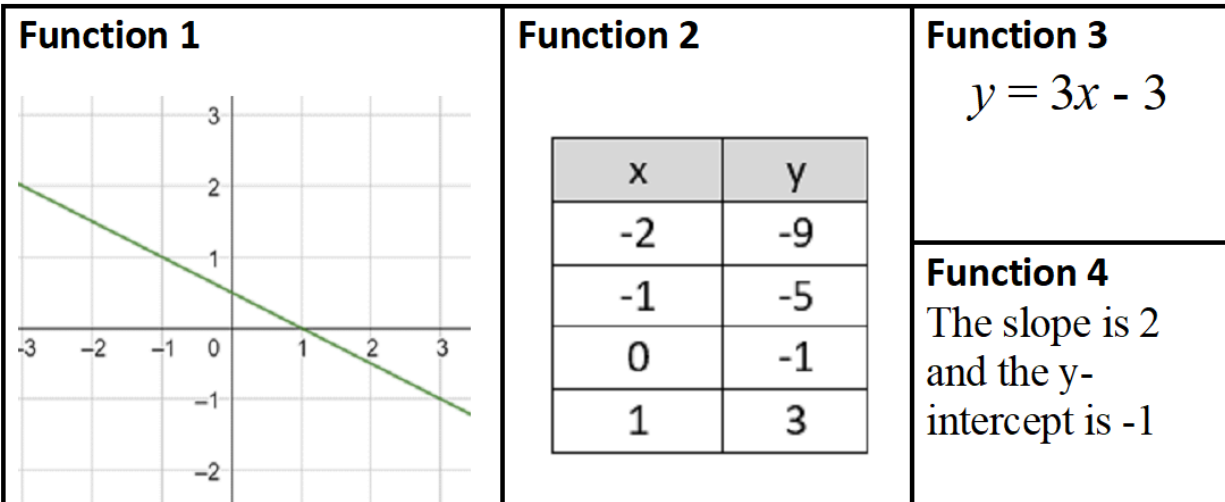
Wrong answer 2: function 1; 2 and 3

Wrong answer 3: function 1; 2 and 4

Learning goal section: 2.7

Feedback: functions 2; 3 and 4 is the correct option

Image:



Q037

Question: Which function has the graph with a y-intercept farthest from 0

Correct answer: Function 3

Wrong answer 1: Function 1

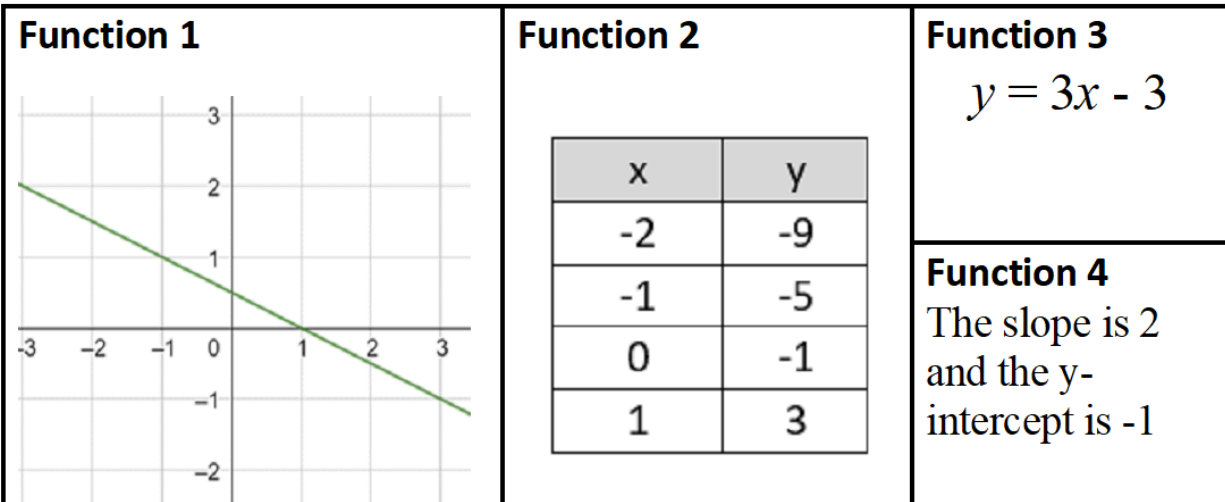
Wrong answer 2: Function 2

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 3 is correct

Image:



Q038

Question: Which function's graph is the steepest

Correct answer: Function 4

Wrong answer 1: Function 1

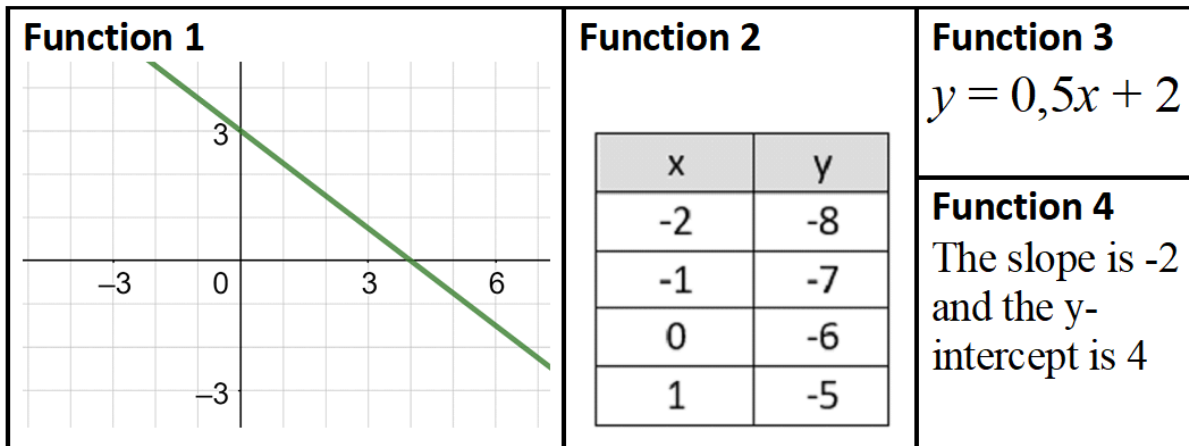
Wrong answer 2: Function 2

Wrong answer 3: Function 3

Learning goal section: 2.7

Feedback: Function 4 is correct because the slope has the highest magnitude (or value)

Image:



Q039

Question: Which functions have graphs with slopes smaller than 1

Correct answer: Functions 1; 3 and 4

Wrong answer 1: function 1; 2 and 4

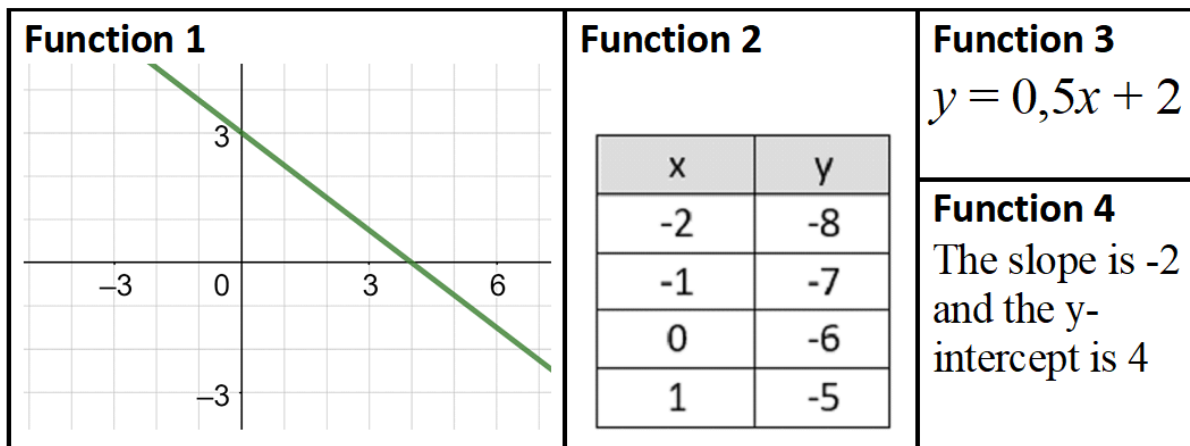
Wrong answer 2: function 1; 2 and 3

Wrong answer 3: function 2; 3 and 4

Learning goal section: 2.7

Feedback: Functions 1; 3 and 4 is the correct option

Image:



Q040

Question: Which function has the graph with a y-intercept farthest from 0

Correct answer: Function 2

Wrong answer 1: Function 1

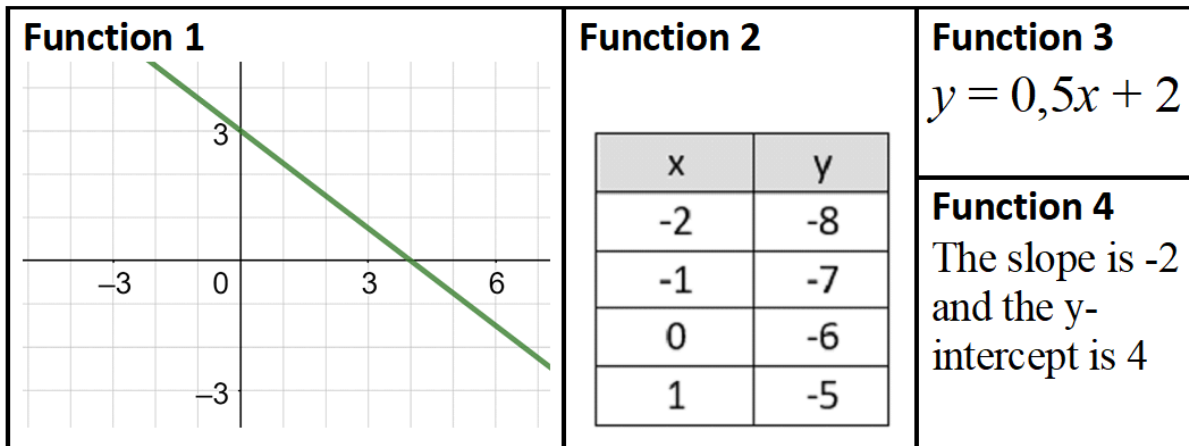
Wrong answer 2: Function 3

Wrong answer 3: Function 4

Learning goal section: 2.7

Feedback: Function 2 is correct

Image:



Q041

Question: What is the missing value in the table?

Correct answer: 3

Wrong answer 1: 4

Wrong answer 2: 5

Wrong answer 3: 6

Learning goal section: 1.1

Feedback: Value 3 is correct. The rate of change is constant and equal to 2 (difference between the y-values 1 and -1 divided by the difference between the correspondent x-values -1 and -2). To calculate the y-value for $x=0$ you add the rate 2 to the y-value for $x=-1$. That is $1+2=3$.

Image:

x	-2	-1	0	1	2
y	-1	1		5	7

Q042

Question: What is the missing value in the table?

Correct answer: -1

Wrong answer 1: -2

Wrong answer 2: 0

Wrong answer 3: 1

Learning goal section: 1.1

Feedback: Value -1 is correct. The rate of change is constant and equal to 3 (difference between the y-values -4 and -7 divided by the difference between the correspondent x-values -1 and -2). To calculate the y-value for $x=0$ you add 3 to the y-value for $x=-1$. That is $-4+3=-1$.

Q043

Question: How are the lines of the equations $y=3x-8$ and $2y-6x+16=0$ related to each other?

Correct answer: The same line

Wrong answer 1: Parallel lines

Wrong answer 2: Perpendicular lines

Wrong answer 3: Lines that are neither parallel nor perpendicular

Learning goal section: 3.1

Feedback: The lines are the same. The equation $2y-6x+16=0$ can be written as $2y=6x-16$. Divide both sides by 2 and you get $y=3x-8$

Q044

Question: Which lines are parallel: A: $5x=y-1$ B: $y=5x-1$ C: $20x-4y$

Correct answer: They are all parallel

Wrong answer 1: A & B

Wrong answer 2: B & C

Wrong answer 3: A & C

Learning goal section: 3.1

Feedback: They are all parallel because they have equal slope: 5

Q045

Question: What is the equation of the line that is perpendicular to the line $5x-3y+30$ and passes through the point $(-2; 7)$

Correct answer: $5y+3x=29$

Wrong answer 1: $3y+5x=25$

Wrong answer 2: $5y-3x=41$

Wrong answer 3: $5y-3x=-31$

Learning goal section: 3.1

Feedback: $5y+3x=29$ is correct

Q046

Question: What is the x-coordinate of the intersection point for the lines $2x+5y=21$ and $x+y=3$?

Correct answer: -2

Wrong answer 1: -5

Wrong answer 2: 2

Wrong answer 3: 5

Learning goal section: 3.4

Feedback: Option -2 is correct

Q047

Question: What is the y-coordinate of the intersection point for the lines $7x+2y=3$ and $x-3y=30$?

Correct answer: -9

Wrong answer 1: -3

Wrong answer 2: 3

Wrong answer 3: 9

Learning goal section: 3.4

Feedback: Option -9 is correct

Q048

Question: If $2x-3y=24$ and $3x+4y=2$; what is the value of $x-y$?

Correct answer: 10

Wrong answer 1: 2

Wrong answer 2: 22

Wrong answer 3: 26

Learning goal section: 3.2

Feedback: 10 is correct

Q049

Question: If $a+b=5$ and $3a+2b=20$; then what is $3a+b$ equal to?

Correct answer: 25

Wrong answer 1: 10

Wrong answer 2: 15

Wrong answer 3: 20

Learning goal section: 3.2

Feedback: 25 is correct. There are several strategies possible.

Q050

Question: Using the given point; what is the equation of this straight line?

Correct answer: $y - 2 = 3(x - 1)$

Wrong answer 1: $y = 3x -$

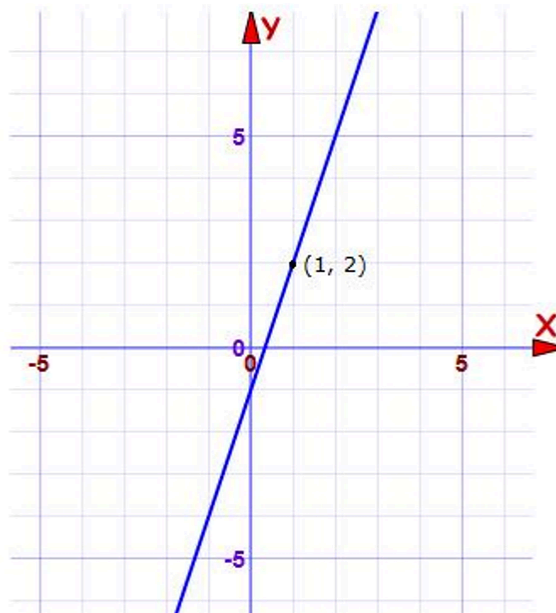
Wrong answer 2: $y - 2 = \frac{1}{3}(x - 1)$

Wrong answer 3: $y - 1 = 3(x - 2)$

Learning goal section: 3.3

Feedback: $y - 2 = 3(x - 1)$ is correct

Image:



Q051

Question: Which of the following graphs represents a linear function?

Correct answer: Graph C

Wrong answer 1: Graph A

Wrong answer 2: Graph B

Wrong answer 3: Graph D

Learning goal section: 1.1

Feedback: Graph C is correct

Q052

Question: Which of the following tables represents a linear function?

Correct answer: D

Wrong answer 1: A

Wrong answer 2: B

Wrong answer 3: C

Learning goal section: 1.1

Feedback: Table D is correct because the rate of change is constant (difference between the y-values divided by the difference between the correspondent x-values)

Image:

x	y
1	5
2	10
3	5

A

x	y
1	3
2	6
3	12

B

x	y
1	1
2	4
3	9

C

x	y
1	7
2	9
3	11

D

Q053

Question: Which of these lines has slope -5?

Correct answer: c

Wrong answer 1: a

Wrong answer 2: b

Wrong answer 3: d

Learning goal section: 1.3

Feedback: graph (c) is correct because the sign of slope is negative (decreasing graph) and greater magnitude (the graph is more steep)

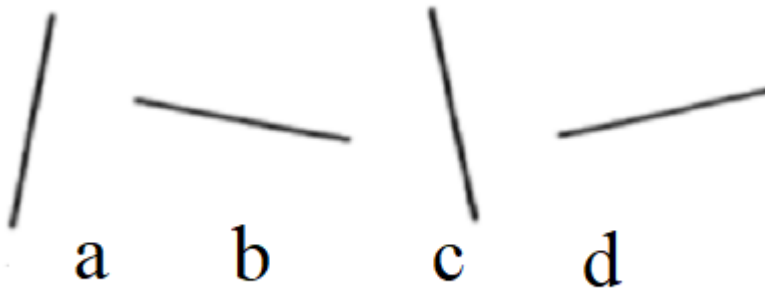


Image:

Q054

Question: "The figure shows the first four V-patterns. Each pattern has a number. Which number has a V-pattern with 17 dots?"

Correct answer: 8

Wrong answer 1: 6

Wrong answer 2: 7

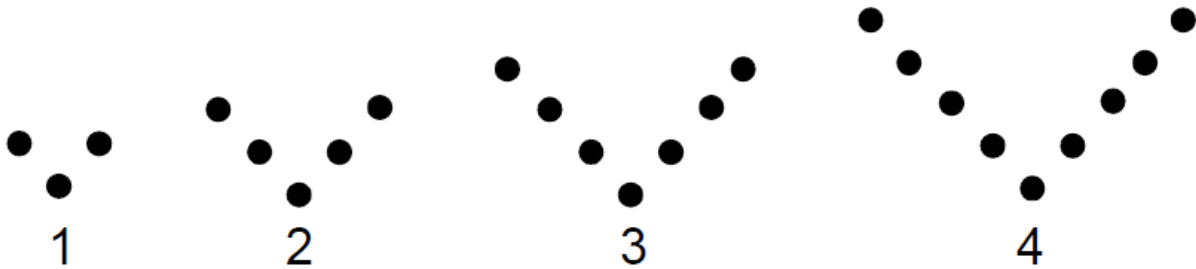
Learning goal section: 1.1

Wrong answer 3: There is no V-pattern with 17 dots

Feedback: It must be 8. The constant rate of change is 2 (you add always 2 dots to each new pattern).

Pattern 1 has 3 dots; pattern 2 has 5 dots;...and pattern 8 has 17 dots

Image:



Q055

Question: "The figure shows the first four V-patterns. Each pattern has a number. How many dots has the V-pattern with number 85?"

Correct answer: 171

Wrong answer 1: 169

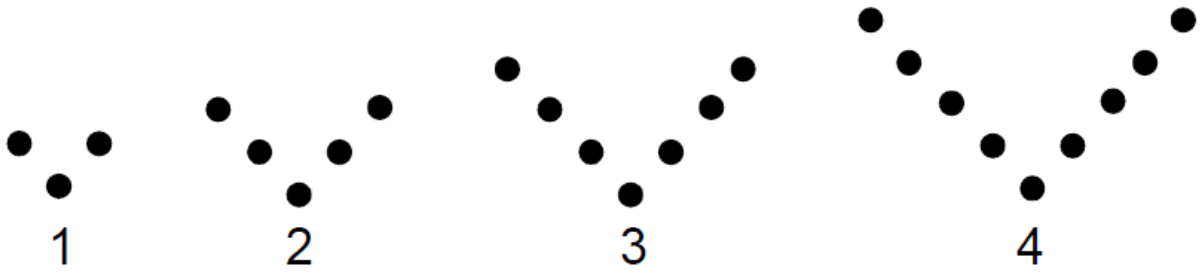
Wrong answer 2: 170

Wrong answer 3: 168

Learning goal section: 1.1

Feedback: The answer is 171. The constant rate of change is 2 and the y-intercept is 1 (for pattern zero there 1 dot). The whole pattern is given by the formula $y = 2x + 1$. For $x = 85$ then is $y = 171$

Image:



Q056

Question: "The figure shows the first three W-patterns. Each pattern has a number. Which number has a W-pattern with 21 dots?"

Correct answer: 5

Wrong answer 1: 4

Wrong answer 2: 6

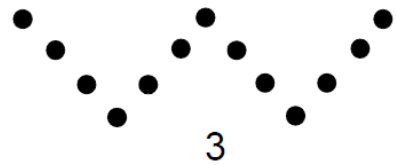
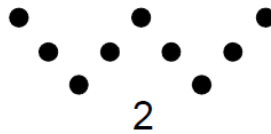
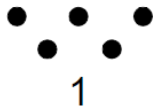
Wrong answer 3: There is no W-pattern with 21 dots

Learning goal section: 1.1

Feedback: It must be 5. The constant rate of change is 4 (you add always 4 dots to each new pattern).

Pattern 1 has 5 dots; pattern 2 has 9 dots;...and pattern 5 has 21 dot

Image:



Q057

Question: "The figure shows the first three W-patterns. Each pattern has a number. How many dots has the W-pattern with number 25?"

Correct answer: 101

Wrong answer 1: 99

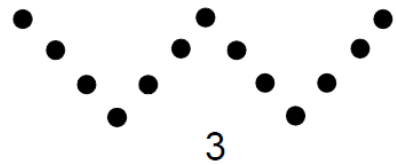
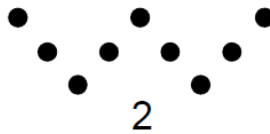
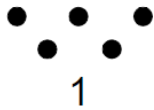
Wrong answer 2: 100

Wrong answer 3: 102

Learning goal section: 1.1

Feedback: The answer is 101. The constant rate of change is 4 and the y-intercept is 1 (for pattern zero there 1 dot). The whole pattern is given by the formula $y=4x+1$. For $x=25$ than is $y=101$

Image:



Q058

Question: See the road from A to H. What is the slope of the line segment AB?

Correct answer: 2

Wrong answer 1: 4

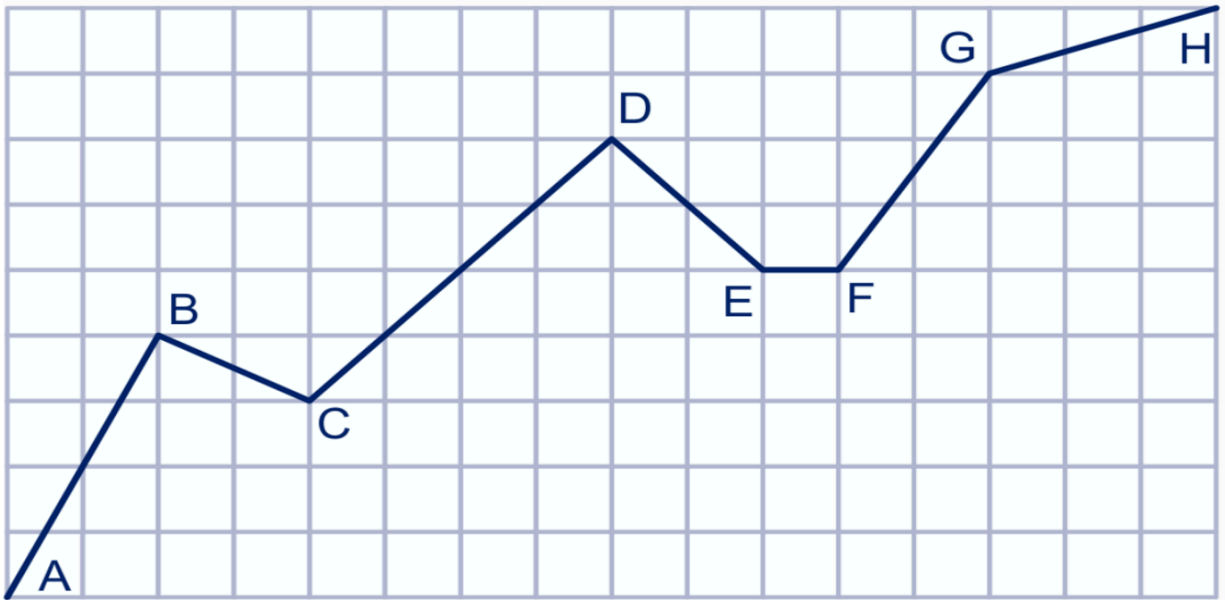
Wrong answer 2: 0.5

Wrong answer 3: 1

Learning goal section: 1.4

Feedback: 2 is the correct answer because the difference between the y-values divided by the difference between the correspondent x-values is 2.

Image:



Q059

Question: See the road from A to H. What is the slope of the line segment BC?

Correct answer: -0.5

Wrong answer 1: -2

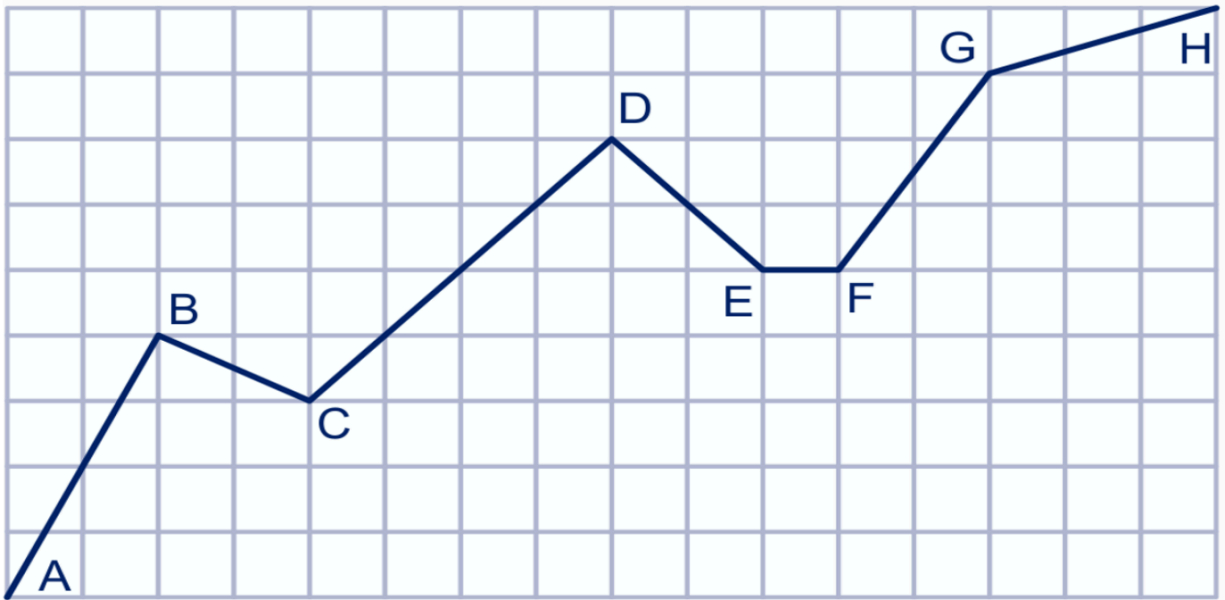
Wrong answer 2: -1

Wrong answer 3: -3

Learning goal section: 1.4

Feedback: the correct answer is -0.5 because the difference between the y-values divided by the difference between the correspondent x-values is -0.5.

Image:



Q060

Question: See the road from A to H. What is the slope of the line segment DE?

Correct answer: -1

Wrong answer 1: -2

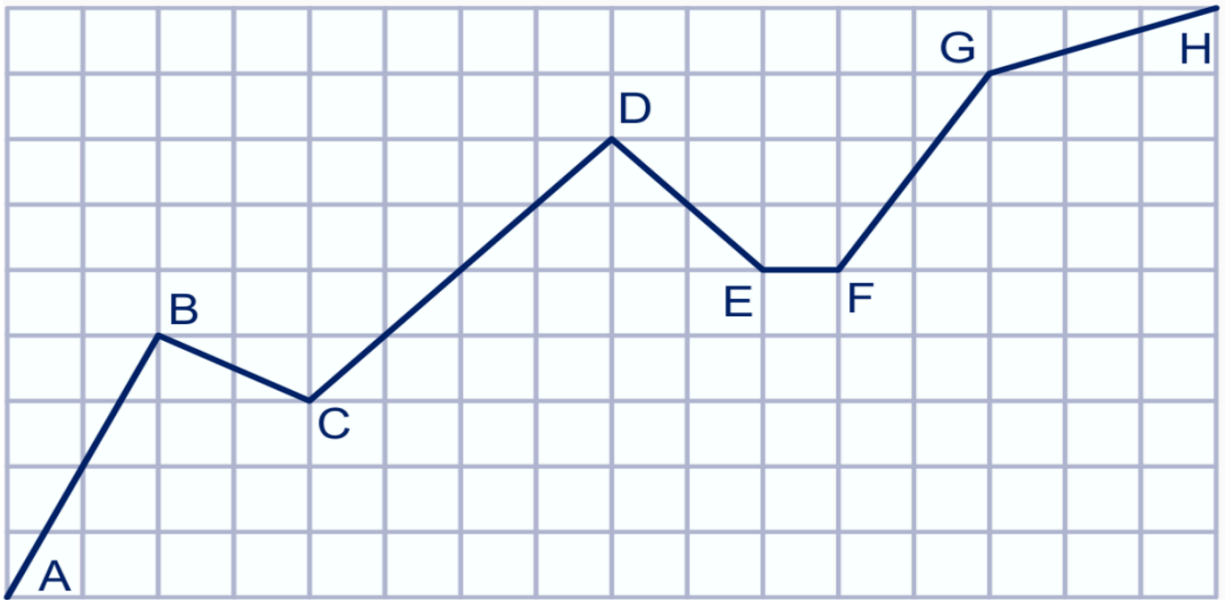
Wrong answer 2: 2

Wrong answer 3: 1

Learning goal section: 1.4

Feedback: the correct answer is -1 because the difference between the y-values divided by the difference between the correspondent x-values is -1.

Image:



Q061

Question: See the road from A to H. What is the slope of the line segment EF?

Correct answer: 0

Wrong answer 1: 1

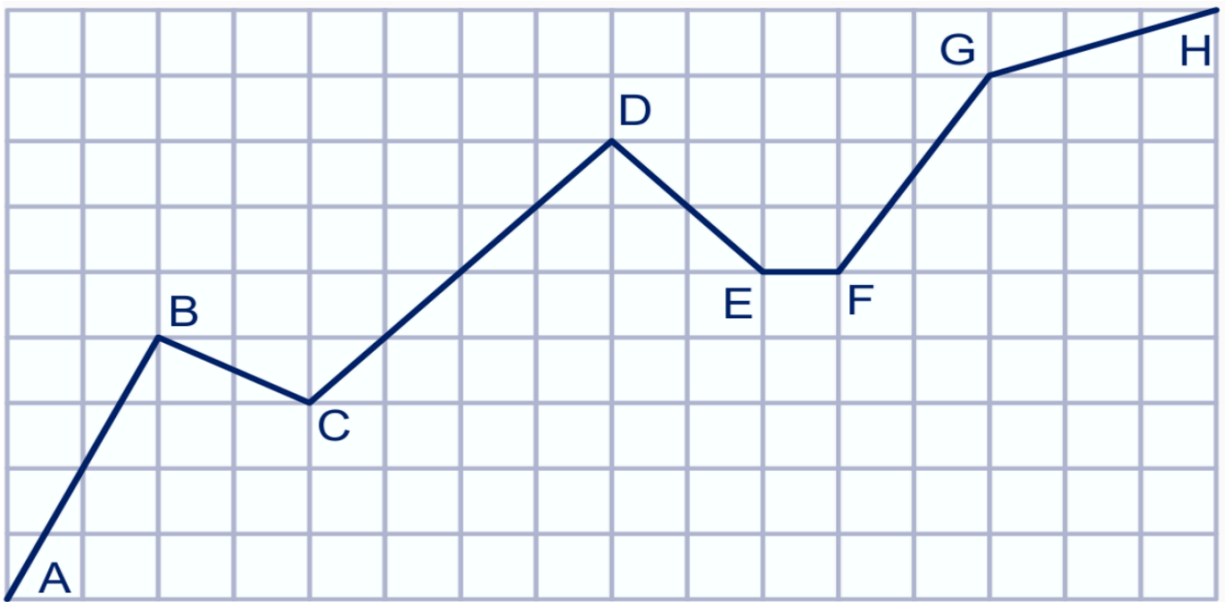
Wrong answer 2: -1

Wrong answer 3: EF doesn't have a slope

Learning goal section: 1.4

Feedback: 0 is the correct answer because the line is horizontal

Image:



Q062

Question: See the road from A to H. What is the slope of the line segment FG?

Correct answer: 1.5

Wrong answer 1: 2

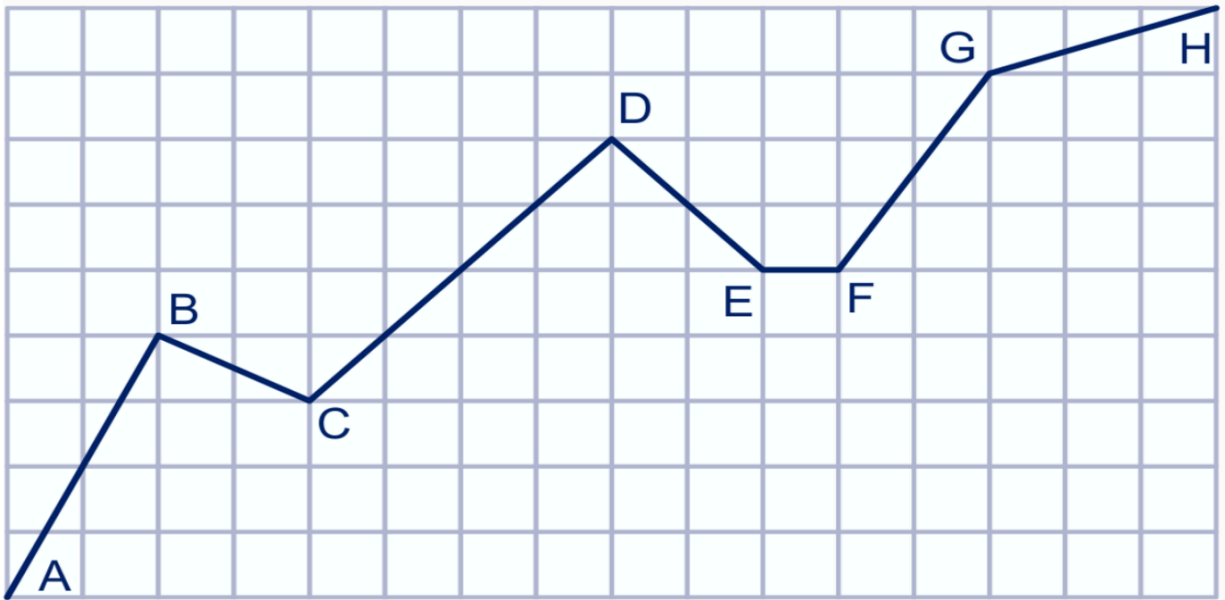
Wrong answer 2: 3

Wrong answer 3: $\frac{2}{3}$

Learning goal section: 1.4

Feedback: 1.5 is the correct answer because the difference between the y-values divided by the difference between the correspondent x-values is 1.5.

Image:



Q063

Question: See the road from A to H. What is the slope of the line segment GH?

Correct answer: $\frac{1}{3}$

Wrong answer 1: 3

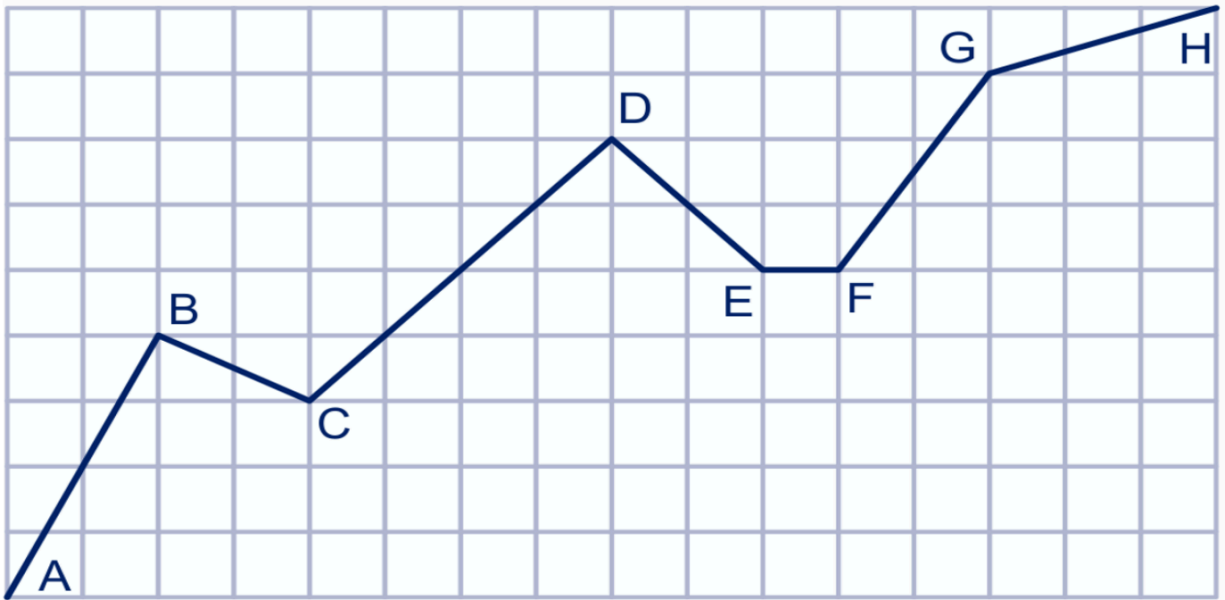
Wrong answer 2: 4

Wrong answer 3: 0.5

Learning goal section: 1.4

Feedback: $\frac{1}{3}$ is the correct answer because the difference between the y-values divided by the difference between the correspondent x-values is $\frac{1}{3}$

Image:



Q064

Question: "Given the equation $y = x + 4$. Which student is right?"

Correct answer: Julia: this line goes through the axis at (0;4).

Wrong answer 1: Peter: this line goes through the axis at (4;0).

Wrong answer 2: Paul: this line has slope 4.

Wrong answer 3: None of the students is right.

Learning goal section: 2.6

Feedback: the correct option is from Julia

Q065

Question: Which line has y-intercept 4?

Correct answer: a

Wrong answer 1: b

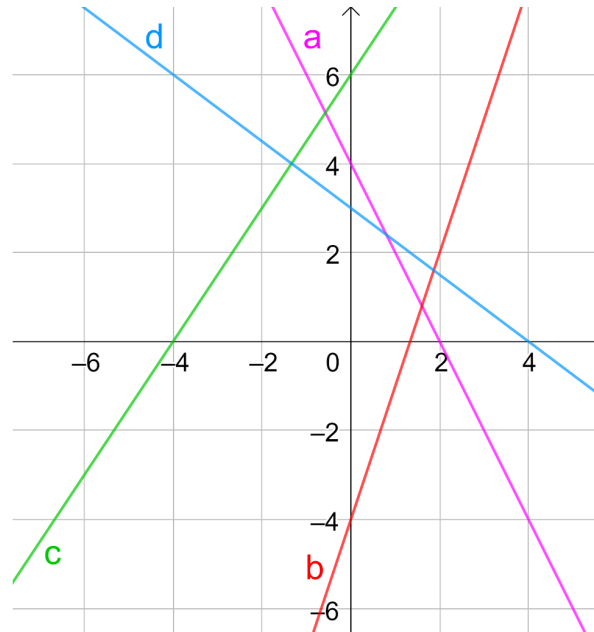
Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 1.2

Feedback: a is correct because the line crosses the y-axis by 4

Image:



Q066

Question: Which line goes through point $(0; -4)$?

Correct answer: b

Wrong answer 1: a

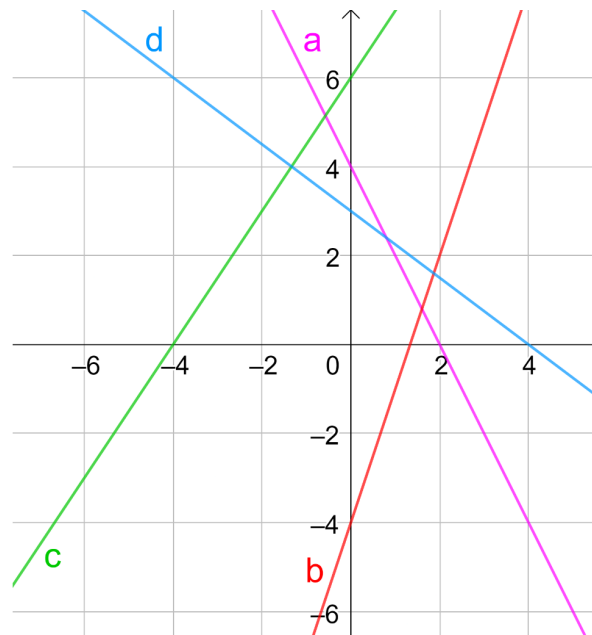
Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 1.2

Feedback: b is correct because the line crosses the x-axis by zero and the y-axis by -4

Image:



Q067

Question: Which line has y-intercept 4?

Correct answer: a

Wrong answer 1: b

Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 1.2

Feedback: a is correct because if the x-value is zero the y-value is 4 (y-intercept)

Image:

$$a : y = -2x + 4$$

$$b : y = 2x - 4$$

$$c : y = 4x - 2$$

$$d : y = -4x + 2$$

Q068

Question: Which line goes through point (0;-4)?

Correct answer: b

Wrong answer 1: a

Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 1.2

Feedback: b is correct because if the x-value is zero the y-value is - 4

Image:

$$a : y = -2x + 4$$

$$b : y = 2x - 4$$

$$c : y = 4x - 2$$

$$d : y = -4x + 2$$

Q069

Question: Which line has y-intercept 4?

Correct answer: table C

Wrong answer 1: table A

Wrong answer 2: table B

Wrong answer 3: table D

Learning goal section: 1.2

Feedback: table C is correct because for $x=0$ the y-value is 4

Image:

table A

1	2	3	4	5
-6	-4	-2	0	4

table B

-5	-4	-3	-2	-1
-2	0	2	4	6

table C

1	2	3	4	5
2	0	-2	-4	-6

table D

-5	-4	-3	-2	-1
6	4	2	0	-2

Q070

Question: Which line goes through point (0;-4)?

Correct answer: d

Wrong answer 1: a

Wrong answer 2: b

Wrong answer 3: c

Learning goal section: 1.2

Feedback: d is correct because for $x=0$ the y -value is -4

Image:

table A

1	2	3	4	5
-6	-4	-2	0	4

table B

-5	-4	-3	-2	-1
-2	0	2	4	6

table C

1	2	3	4	5
2	0	-2	-4	-6

table D

-5	-4	-3	-2	-1
6	4	2	0	-2

Q071

Question: Which line has the highest y-intercept?

Correct answer: a

Wrong answer 1: b

Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 1.2

Feedback: option a is correct because 4 is higher than -4; -2 and 2 (which are the other y-intercepts)

Image:

$$a : y = -2x + 4$$

$$b : y = 2x - 4$$

$$c : y = 4x - 2$$

$$d : y = -4x + 2$$

Q072

Question: Which of the graphs corresponds to the table?

Correct answer: b

Wrong answer 1: a

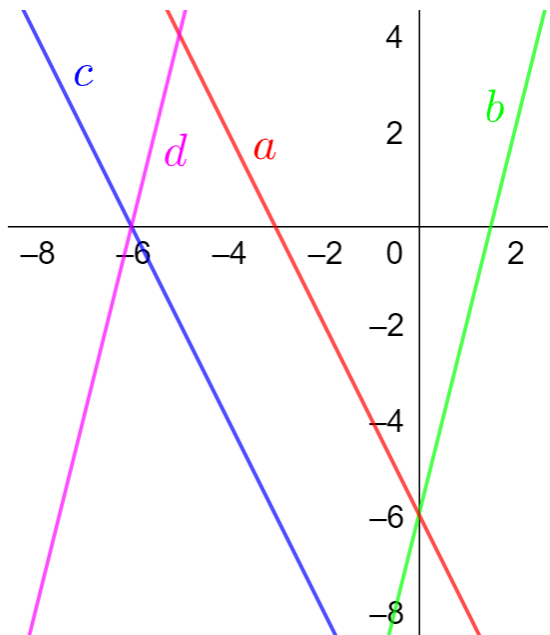
Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 2.1

Feedback: b is correct because the line has positive slope and the y-intercept is -6.

Image:



0	6	12	18	24
-6	18	42	66	90

Q073

Question: Which of the tables corresponds to the graph ?

Correct answer: table B

Wrong answer 1: table A

Wrong answer 2: table C

Wrong answer 3: table D

Learning goal section: 2.1

Feedback: table d is correct

Image:

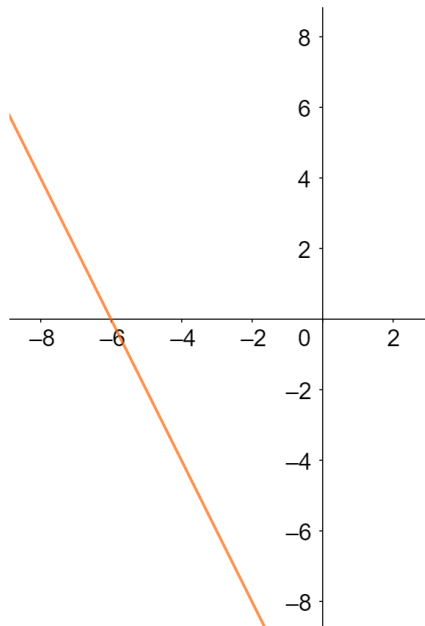


table A

0	6	12	18	24
24	48	72	96	120

table B

0	6	12	18	24
-12	-24	-36	-48	-60

table C

0	6	12	18	24
-6	18	42	66	90

table D

0	6	12	18	24
-6	-18	-30	-42	-54

Q074

Question: Which line has slope 2 and y-intercept -4?

Correct answer: d

Wrong answer 1: a

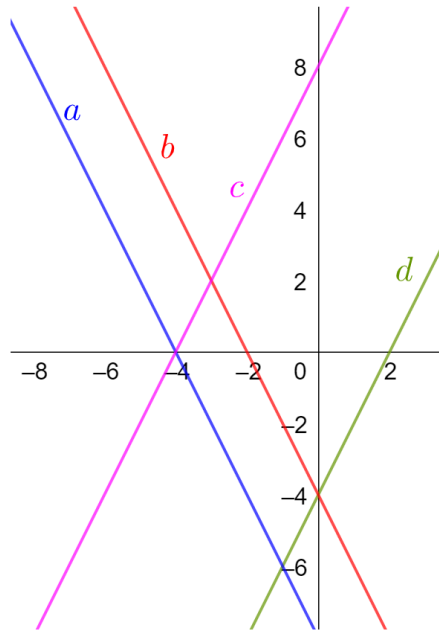
Wrong answer 2: b

Wrong answer 3: c

Learning goal section: 2.2

Feedback: d is correct because for each step in the positive x-direction the y-values increases with two units. And the line crosses the y-axis by -4

Image:



Q075

Question: Which line has slope -2 and goes through (1;1)?

Correct answer: b

Wrong answer 1: a

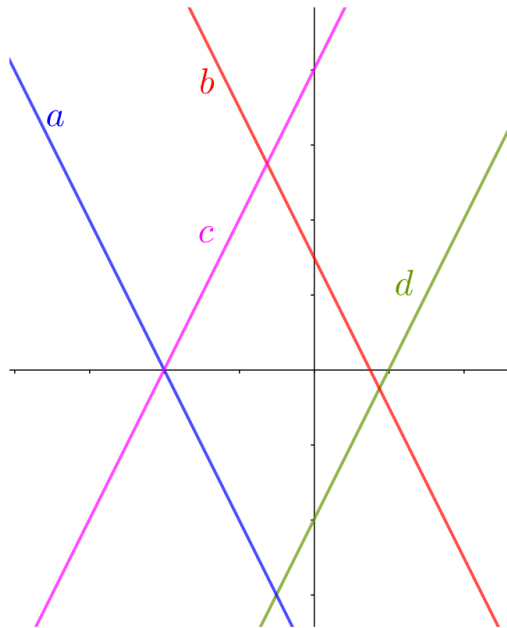
Wrong answer 2: c

Wrong answer 3: d

Learning goal section: 2.2

Feedback: b is correct because it is the only line with both positive slope and positive y-intercept

Image:



Q076

Question: "Given the graph. Which student is right?"

Correct answer: None of the students is right.

Wrong answer 1: Ebbe: the y-intercept is positive.

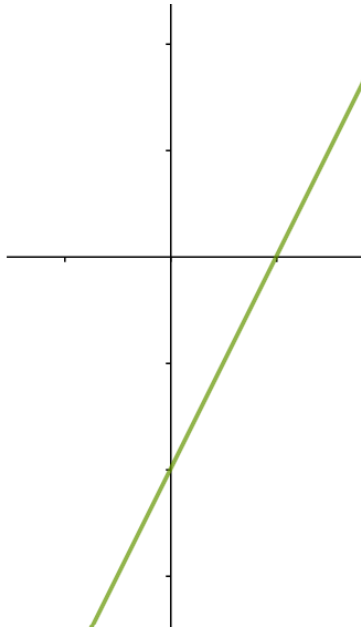
Wrong answer 2: Nils: the line passes through $(-1;1)$.

Wrong answer 3: Ines: the slope is negative.

Learning goal section: 2.2

Feedback: None of the students is right is the correct answer because: the y-intercept is negative (not positive); the line goes through $(-2;1)$ and not $(-1; 1)$; the slope is positive (not negative).

Image:



Q077

Question: Which table corresponds to a decreasing linear function with y-intercept -4?

Correct answer: Table D

Wrong answer 1: Table A

Wrong answer 2: Table B

Wrong answer 3: Table C

Learning goal section: 2.5

Feedback: Table D is correct because if $x=0$ in Table D then is $y=-4$

Image:

table A

1	2	3	4	5
-6	-4	-2	0	4

table C

1	2	3	4	5
2	0	-2	-4	-6

table B

-5	-4	-3	-2	-1
-2	0	2	4	6

table D

-5	-4	-3	-2	-1
6	4	2	0	-2

Q078

Question: "Given the table. Which student is right?"

Correct answer: Marloes: this linear function has slope -2.

Wrong answer 1: Paul: this linear function passes through (10;-10).

Wrong answer 2: Ines: this linear function has y-intercept 4.

Wrong answer 3: None of the students is right.

Learning goal section: 2.5

Feedback: Marloes is right because the difference between the y-values (for example $4-8=-4$) divided by the difference between the correspondent x-values is -2.

0	2	4	6	8
8	4	0	-4	-8

Image:

Q079

Question: Which table corresponds to the formula $y = -2(x-4)$

Correct answer: Table D

Wrong answer 1: Table A

Wrong answer 2: Table B

Wrong answer 3: Table C

Learning goal section: 2.3

Feedback: Table D is correct. There are several ways to find the answer. For instance: $y = -2(x-4)$ therefore $y = -2x + 8$; which means that for $x=0$ the value of y is 8.

Image:

table A

0	2	4	6	8
-8	-4	0	4	8

table B

0	2	4	6	8
4	0	-4	-8	-12

table C

0	2	4	6	8
4	8	12	16	20

table D

0	2	4	6	8
8	4	0	-4	-8