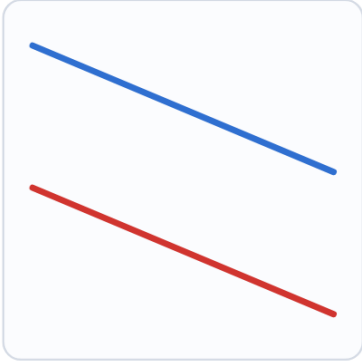


Linear Relationships

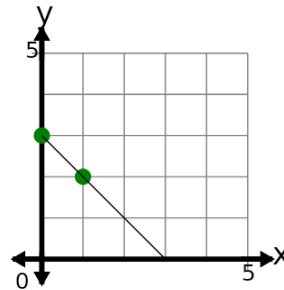
- 1 Which pair of linear equations matches this graph?



A $2x + y = -2$
 $2x + y = -6$

B $4x + 4y = 5$
 $8x + 8y = 10$

- 2 What slope does the line on this graph have?

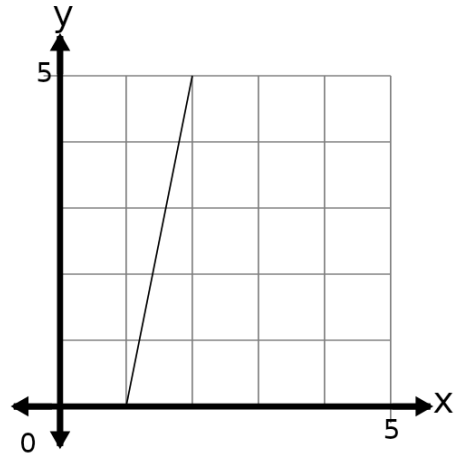


A $m=1$

B $m=-1$

C $m=-0.5$

- 3 Find the slope of the line



A 0.5

B -1.25

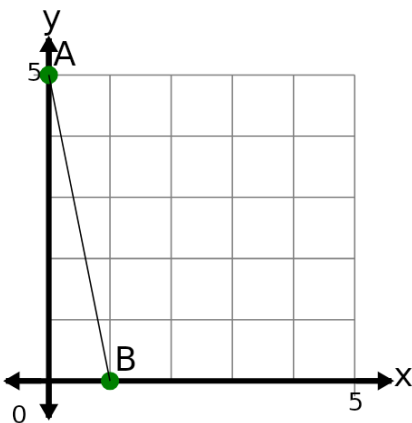
C -0.5

D 5

E 0.2

F 0

- 4 Find the slope of the line between Point A and Point B



A -0.2

B -9

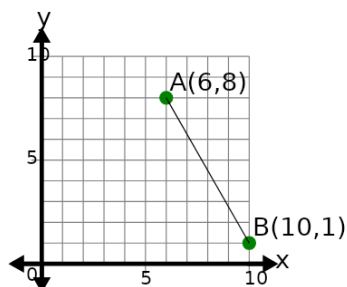
C -11

D -6

E 4

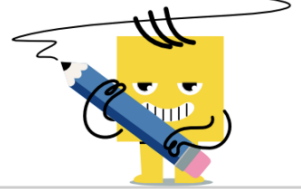
F -5

- 5 Is the slope of segment AB equal to $-7/4$



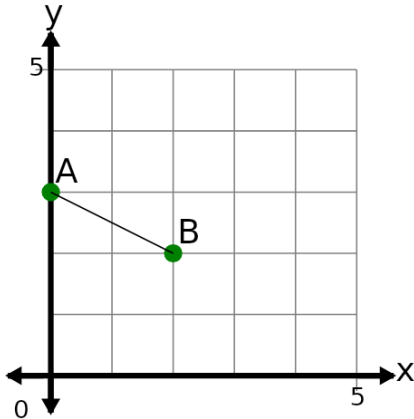
A Yes

B No



Linear Relationships

- 6 Find the slope of the line between Point A and Point B



- | | | |
|---------|-----------|-----------|
| A
-2 | B
-1 | C
0.5 |
| D
2 | E
-0.5 | F
-0.1 |

- 7 What slope would this line equation have?

$$y = -1x + 1$$

- | | |
|-----------------|--------------|
| A
$m = -1$ | B
$m = 1$ |
| C
$m = -0.5$ | |

- 8 What slope would this line of X, Y values have?

X	Y
0	3
1	5
2	7
3	9
4	11

- | | |
|---------------|----------------|
| A
$m = 1$ | B
$m = 2$ |
| C
$m = -2$ | D
$m = 0.5$ |

- 9 What slope would this line of X, Y values have?

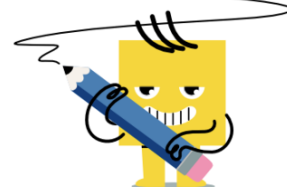
X	Y
0	1
1	0
2	-1
3	-2
4	-3

- | |
|-------------------------|
| A
$m = -\frac{1}{2}$ |
| B
$m = 1$ |
| C
$m = -1$ |

- 10 What equation would create this chart of X, Y values?

X	Y
0	2
1	3
2	4
3	5
4	6

- | |
|-----------------------------|
| A
$y = \frac{1}{2}x + 2$ |
| B
$y = -1x + 2$ |
| C
$y = 1x + 2$ |



Linear Relationships

11 Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
2	-4	-2	
3	-6	-2	0
4	-8	-2	0
5	-10	-2	0
6	-12	-2	

A
Linear

B
Quadratic

C
Neither

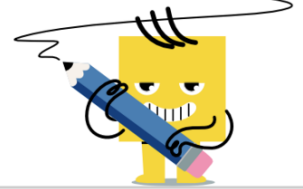
12 Complete the first and second differences. Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
3	-8		
4	-4		
5	-3		
6	-6		
7	-9		

A
Linear

B
Neither

C
Quadratic



Linear Relationships

13 Which completed table shows a linear function?

A

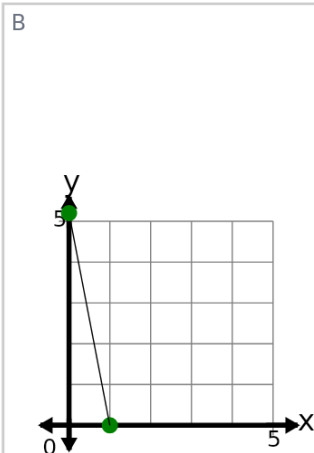
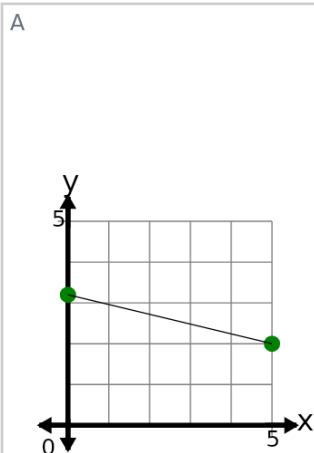
x	y	1st Diff	2nd Diff
0	6		
1	9	3	
2	8	-1	-4
3	3	-5	-4
4	-6	-9	-4

B

x	y	1st Diff	2nd Diff
3	1		
4	0	-1	0
5	-1	-1	0
6	-2	-1	0
7	-3	-1	

14 What graphed line shows this line equation?

$$y = -\frac{1}{5}x + 3.2$$



15 What is age called in this trend?

As age increases, points tends to decrease

A Independent Variable

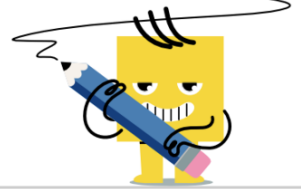
B Dependent Variable

16 What is weight called in this trend?

As age increases, weight tends to decrease

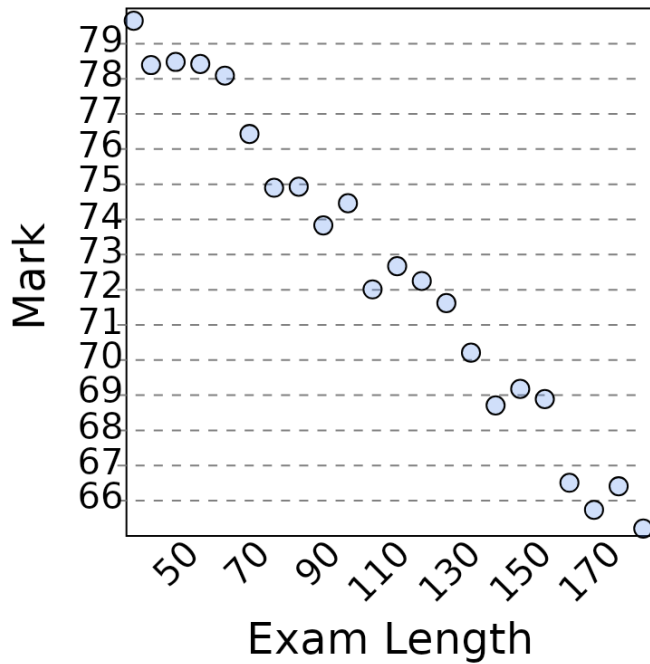
A Explanatory Variable

B Response Variable



Linear Relationships

17 What is the independent variable on this scatter plot?



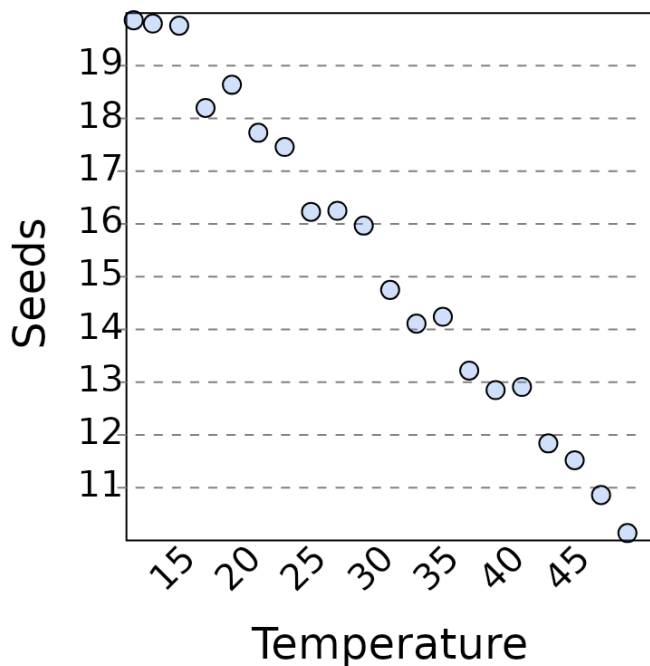
A

Exam Length

B

Mark

18 What is temperature called on this scatter plot?

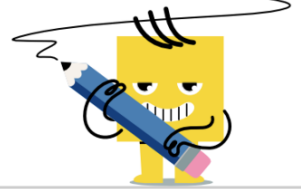


A

Dependent Variable

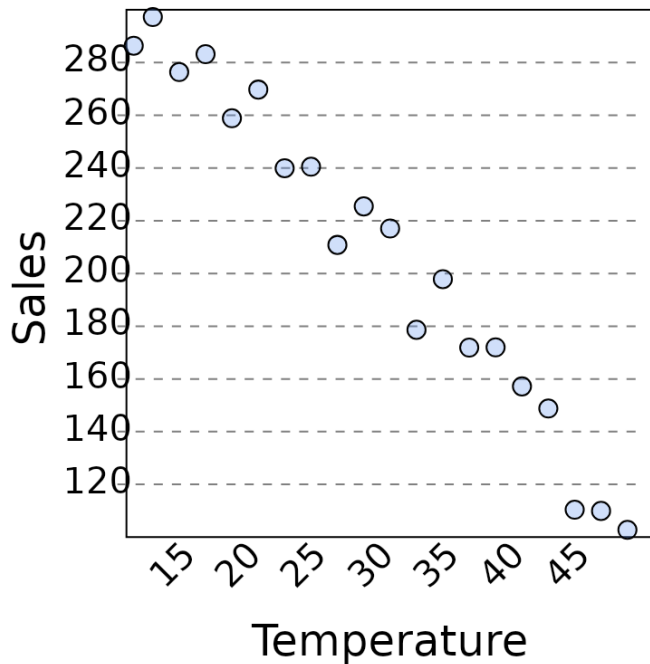
B

Independent Variable



Linear Relationships

19 What is the dependent variable on this scatter plot?



A

Temperature

B

Sales

20 Find the y-intercept (b) of the line through the two (x, y) points with the given slope

(4, 3) and (6,10), slope = 7/2

A -15	B -11	C -20
D 17	E 31	F -7

21 Find the y intercept of this function

$$y = -3x + 5$$

A 7	B 13	C 9
D 1	E 5	F -1

22 Find the y intercept of this function

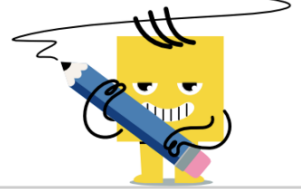
$$y = 4x - 0.3$$

A -3.3	B 2.7	C -2.6
D 0.5	E 1.2	F -0.3

23 Find the y intercept of this function by setting x to zero and solving

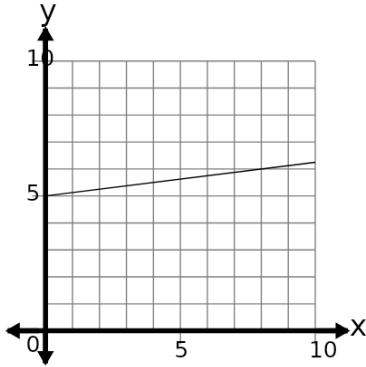
$$-4x - 2y = -8$$

A 3	B 1	C 7
D 12	E 9	F 4



Linear Relationships

- 24** Select the equation that would result in the line on the graph as shown



- | | |
|----------------------|---------------------|
| A $y = -5x - 0.13$ | B $y = 1.63x + 6.5$ |
| C $y = 2.13x + 6.5$ | D $y = 0.13x + 5$ |
| E $y = -1.87x + 3.5$ | |

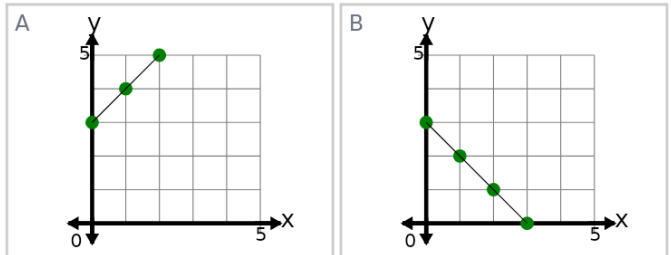
- 25** Find the y intercept of this function by setting x to zero and solving

$$-5x + 5y = -9.9$$

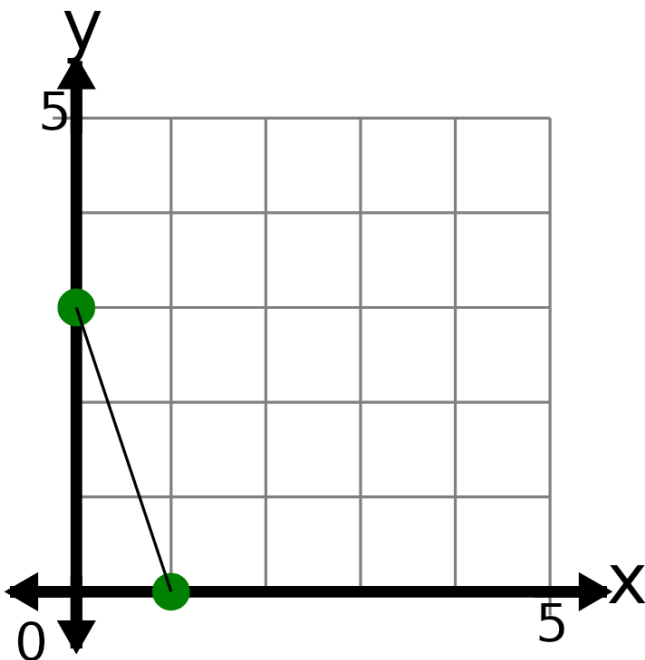
- | | | |
|--------|--------|--------|
| A 0.3 | B -4.3 | C -1.2 |
| D -2.7 | E -2 | F -5 |

- 26** What graphed line shows this equation?

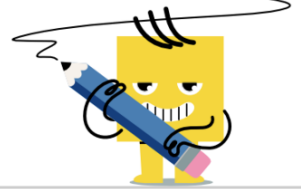
$$y = 1x + 3$$



- 27** What slope does the line on this graph have?



- | |
|----------------------|
| A $m = -3$ |
| B $m = -\frac{1}{3}$ |
| C $m = 3$ |
| D $m = -\frac{3}{2}$ |



Linear Relationships

28 What line equation would create this set of X, Y values?

X	Y
0	3
1	0
2	-3
3	-6
4	-9

A $y = -\frac{1}{3}x + 3$

B $y = 3x + 3$

C $y = -3x + 3$

D $y = -\frac{3}{2}x + 3$

29 What chart of X, Y values would have this slope?

$$m = -3$$

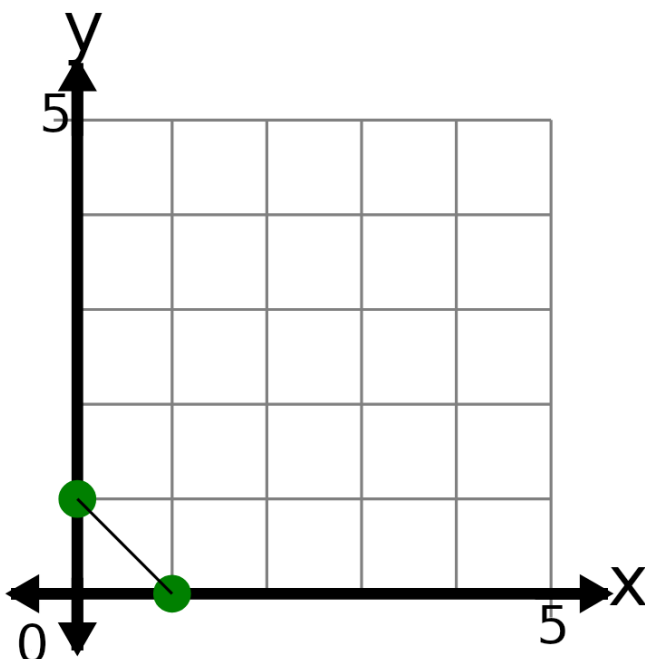
A

X	Y
0	3
1	0
2	-3
3	-6
4	-9

B

X	Y
0	3
1	6
2	9
3	12
4	15

30 What equation would create this graph?



A

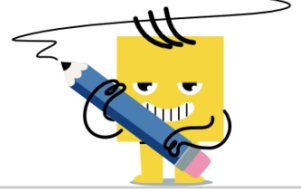
$$y = -1x + 1$$

B

$$y = 1x + 1$$

C

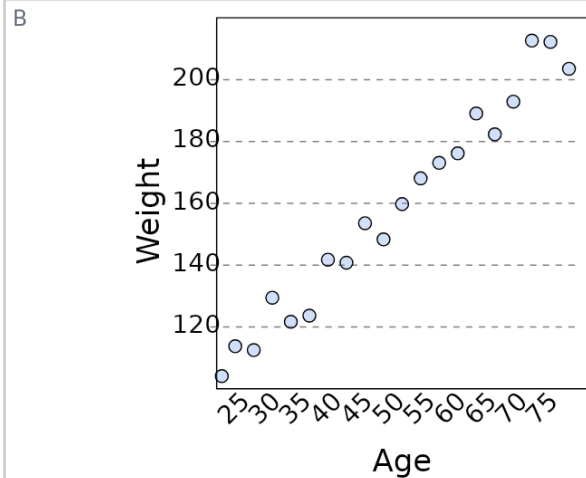
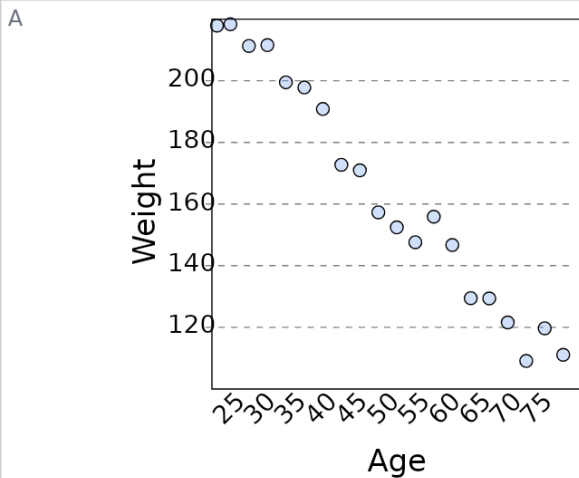
$$y = -\frac{1}{2}x + 1$$



Linear Relationships

31 Which graph matches this equation?

$$\text{Weight} = 2 * \text{Age} + 60$$



32 What chart of X, Y values matches this line equation?

$$y = 3x + 2$$

A

X	Y
0	2
1	3.5
2	5
3	6.5
4	8

B

X	Y
0	2
1	5
2	8
3	11
4	14

33 What chart of X, Y values matches this equation?

$$y = -2x + 3$$

A

X	Y
0	3
1	1
2	-1
3	-3
4	-5

B

X	Y
0	3
1	2
2	1
3	0
4	-1