



Linear Relationships

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

X	Y
0	3
1	8
2	13
3	18
4	23

A $m=2.5$

B $m=5$

C $m=-5$

D $m=0.2$

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

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

A $y = -1x + 3$

B $y = 1x + 3$

C $y = -\frac{1}{2}x + 3$

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

X	Y
0	1.2
1	1
2	0.8
3	0.6
4	0.4

A $m = -5$

B $m = \frac{5}{2}$

C $m = \frac{1}{5}$

D $m = -\frac{1}{5}$

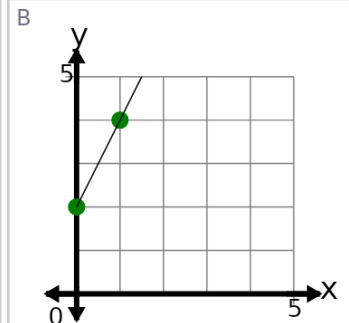
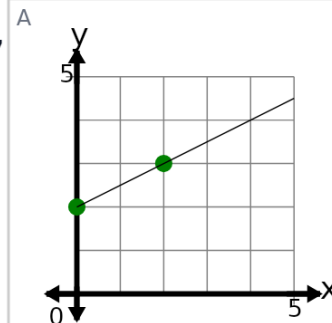
- 4 What is sales called in this trend?
As temperature increases, sales tends to decrease

A Dependent Variable

B Independent Variable

- 5 What graph shows this set of X, Y values?

X	Y
0	2
1	2.5
2	3
3	3.5
4	4





Linear Relationships

6 Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
-1	7	-6	
0	1	-6	0
1	-5	-6	0
2	-11	-6	0
3	-17	-6	

A	Linear
B	Neither
C	Quadratic

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

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

A	Quadratic
B	Neither
C	Linear



Linear Relationships

8 Which completed table shows a linear function?

A	x	y	1st Diff	2nd Diff
	3	8		
	4	8	0	
	5	11	3	3
	6	17	6	3
	7	26	9	3

B	x	y	1st Diff	2nd Diff
	3	-2		
	4	-5	-3	0
	5	-8	-3	0
	6	-11	-3	0
	7	-14	-3	

9 Complete the second differences. Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
-1	9		
0	7	-2	
1	6	-1	
2	6	0	
3	7	1	

A	Linear
B	Neither
C	Quadratic



Linear Relationships

10 What is points called on this scatter plot?



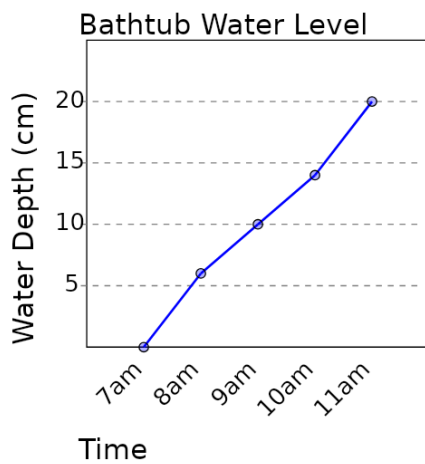
A

Dependent Variable

B

Independent Variable

11 What is the water level at 7am?



A

4

B

7

C

0

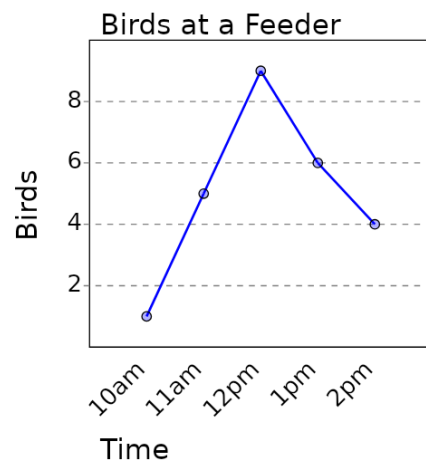
D

1

E

2

12 Which time has a bird count of 5?



A

10am

B

1pm

C

12pm

D

11am

E

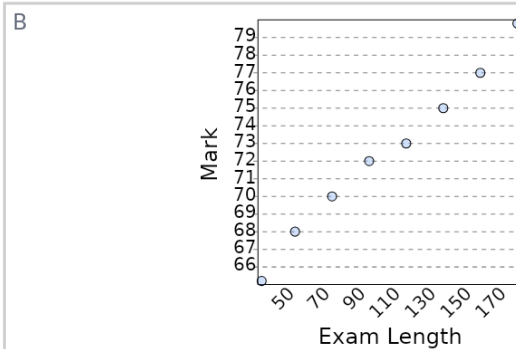
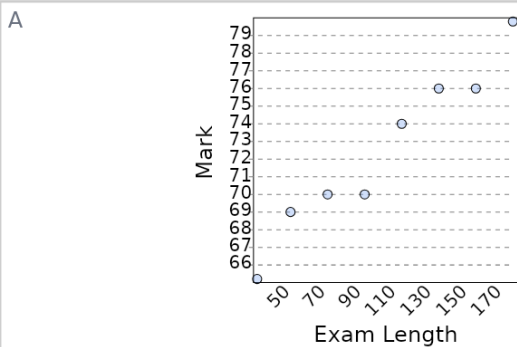
2pm



Linear Relationships

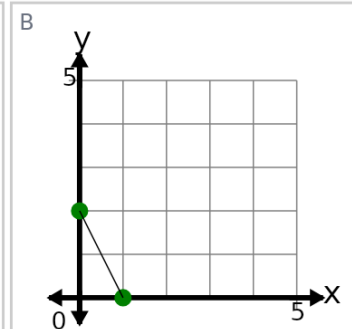
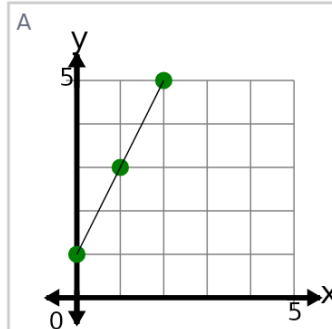
13 Which scatter plot matches this data set?

Exam Length	Mark
30	65
51	69
72	70
93	70
114	74
135	76
156	76
177	80

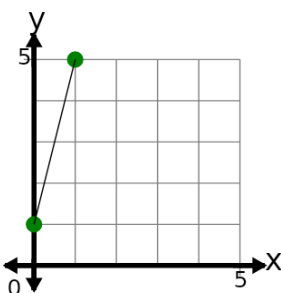


14 What graph matches this chart of X, Y values?

X	Y
0	1
1	3
2	5



15 What slope does the line on this graph have?



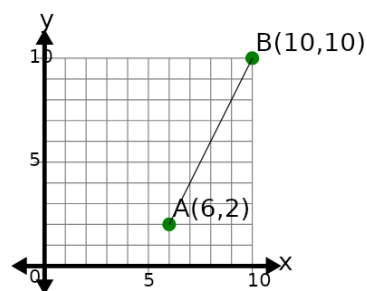
A $m=2$

B $m=0.25$

C $m=-4$

D $m=4$

16 Is the slope of segment AB equal to $1/2$



A Yes

B No



Linear Relationships

17 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

18 Is the slope of segment AB equal to $\frac{5}{2}$?

Point A : (5, 2)

Point B : (10, 4)

A

No

B

Yes

19 Find the equation that best represents this sentence

The length is ten less than two times the width.

A $l = 2w - 10$

B $l = 2w + 10$

C $l = 2w \times 10$

D $l = 10w - 2$

E $l = 2(w - 10)$

20 Which function matches the values in the table?

x	g(x)
-2	6
-1	2
1	-6
2	-10

A

$$g(x) = -4x - 2$$

B

$$g(x) = -6x - 1$$

C

$$g(x) = -3x - 2$$

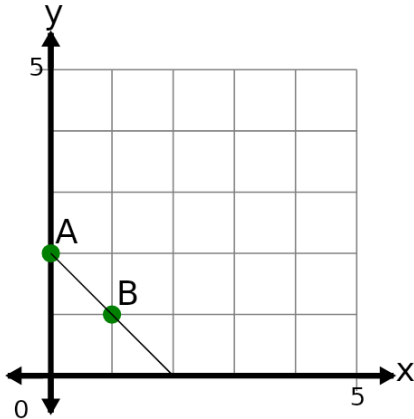
D

$$g(x) = -4x - 1$$



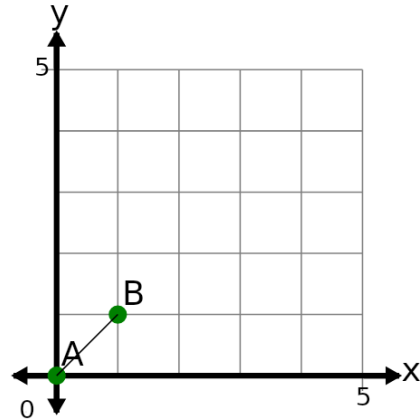
Linear Relationships

21 Find the slope of the line between Point A and Point B



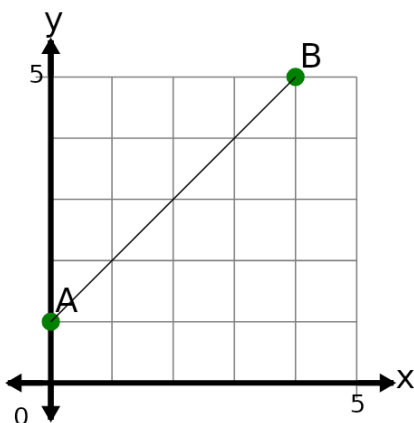
A 0.4	B 1	C -1
D -3	E -1.25	F -0.5

22 Find the slope of the line between Point A and Point B



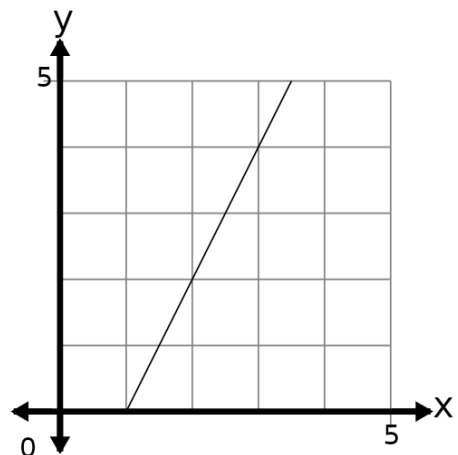
A -0.4	B 1	C -0.6
D 3	E 1.4	F -0.8

23 Find the slope of the line between Point A and Point B



A 1	B -0.6	C 2.8
D -1	E -1.5	F 2

24 Find the slope of the line

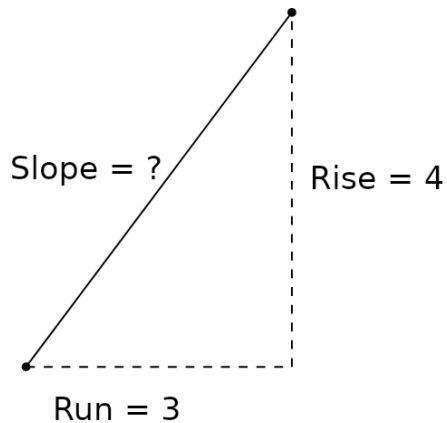


A 4.8	B 1	C 1.5
D 2	E 0.4	F -0.4



Linear Relationships

25 Calculate the slope of the line given that slope is rise/run



- | | | |
|-----------|-----------|-----------|
| A
2.4 | B
0.53 | C
1.33 |
| D
0.75 | E
0.5 | F
-0.8 |

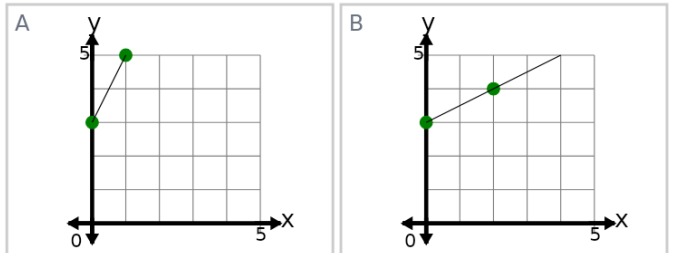
26 What line equation would create this set of X, Y values?

X	Y
0	4
1	8
2	12
3	16
4	

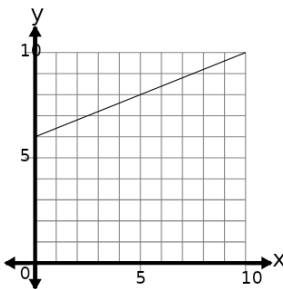
- | | |
|-------------------------|----------------|
| A
$y = \frac{4}{2}x$ | B
$y = -4x$ |
| C
$y = \frac{1}{4}x$ | D
$y = 4x$ |

27 What graphed line shows this line equation?

$$y = 2x + 3$$



28 Select the equation that would result in the line on the graph as shown



- | |
|------------------------|
| A
$y = -2.1x + 6$ |
| B
$y = 0.4x + 6$ |
| C
$y = -6x - 0.4$ |
| D
$y = -0.1x + 7.5$ |