

8.5B Represent Linear Non-Proportional Relationships

Some questions (c) 2017 by Region 10 Educational Service Center.

Some questions (c) 2017 by TEKS Resource System.

Some questions (c) 2017 by The Texas Education Agency.

1 Which table shows a NON-PROPORTIONAL relationship?

A

x	y
4	7
6	12
10	23

B

x	y
4	12
5	15
6	18

C

x	y
2	3
3	4.5
4	6

D

x	y
200	300
40	60
20	30

- 2 The table below shows the charge, in cents, for an international phone call based on the number of minutes used.

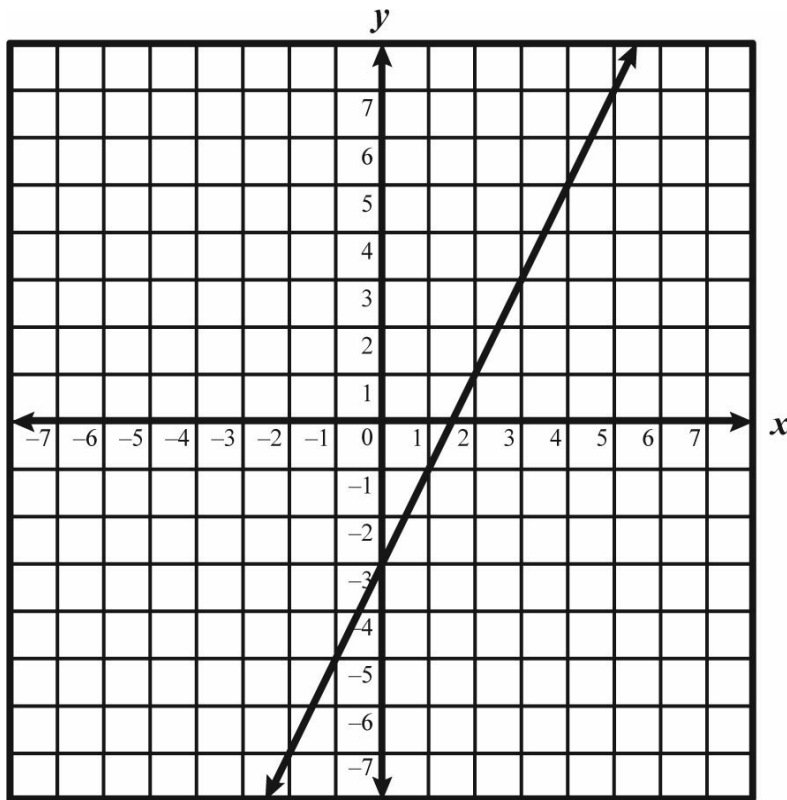
Cost of International Phone Call

Length of Call (minutes)	Charge for Call (cents)
1	20
2	28
3	36
4	44
t	c

Which equation can be used to determine the cost, c , of an international phone call with a length of t minutes?

- F** $c = 12t + 8$
G $c = 20t$
H $c = 8t + 12$
J $c = t + 8$

3 Which of these equations represents the graph below?



- A $y = x^2 + 3$
- B $y = 2x - 3$
- C $y = 2x + 3$
- D $y = x^2 - 3$

- 4 George bought a new motorcycle at an auction. He paid $\frac{3}{4}$ of the original price x , and received an additional discount of \$600. Which of the following equations represents y , the price George paid for the motorcycle?

F $y = \frac{3}{4}x - 600$

G $y = \frac{3}{4}x + 600$

H $y = \frac{1}{4}x - 600$

J $y = \frac{1}{4}x + 600$

5 Which table can be generated from the equation $y = 2x + 1$?

A

x	y
2	1
3	2
4	3
5	4

B

x	y
0	1
1	2
2	3
3	4

C

x	y
1	3
2	5
3	7
4	9

D

x	y
0	3
1	5
2	7
3	9

- 6 Mr. Jenson is planning a painting project. He has purchased paint and supplies for \$650. He will also hire a painter for \$40 an hour.

Which table shows the relationship between the total cost of the painting project in dollars, c , and the number of hours the painter is hired, h ?

F

Painting Cost

h	c
2	80
5	200
9	360
14	560

G

Painting Cost

h	c
2	1,340
5	3,290
9	5,890
14	9,140

H

Painting Cost

h	c
2	770
5	890
9	1,050
14	1,250

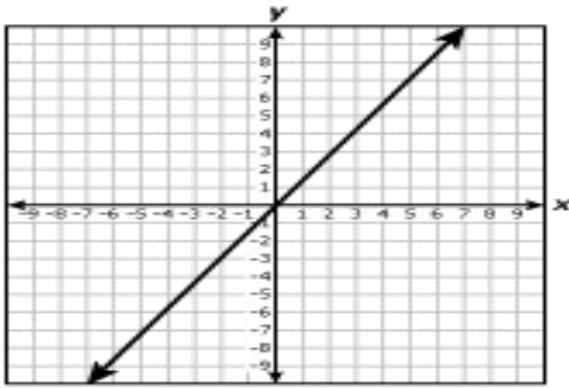
J

Painting Cost

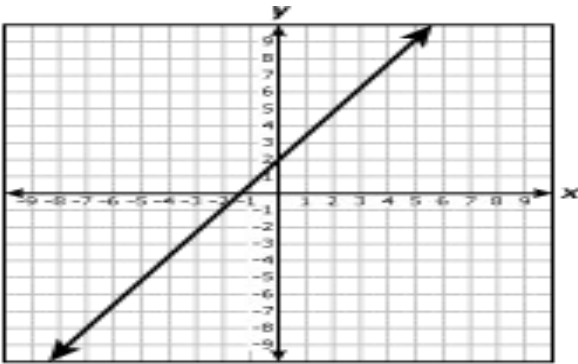
h	c
2	730
5	850
9	1,010
14	1,210

7 Which graph best represents the equation $y = 1.4x + 2$?

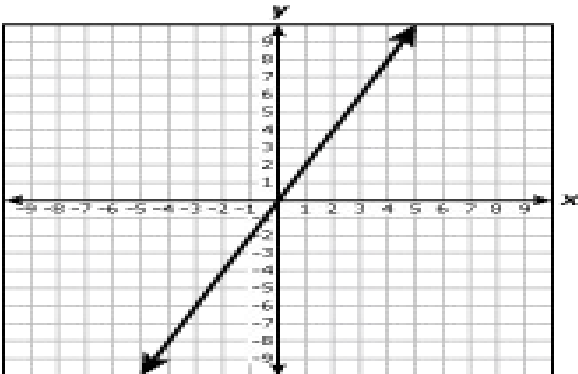
A



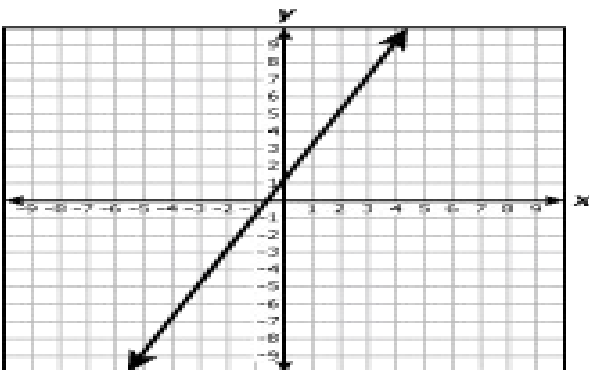
B



C



D

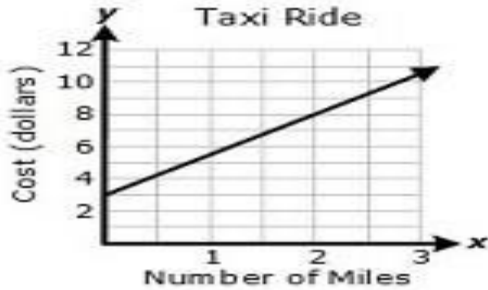


8 The cost to ride in a taxi is a combination of two separate charges.

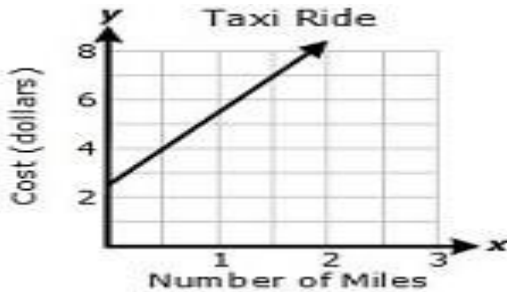
- A drop charge of \$3.00 is applied for each ride in the taxi.
- A distance charge of \$2.50 per mile is applied based on the distance of the taxi ride.

Which graph represents the relationship between the cost of the taxi ride, y , and the number of miles the taxi travels, x ?

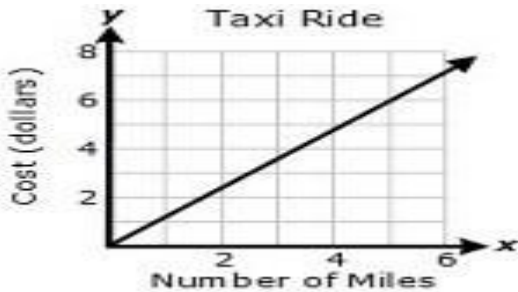
F



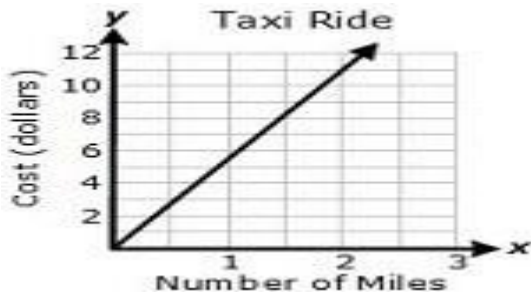
G



H



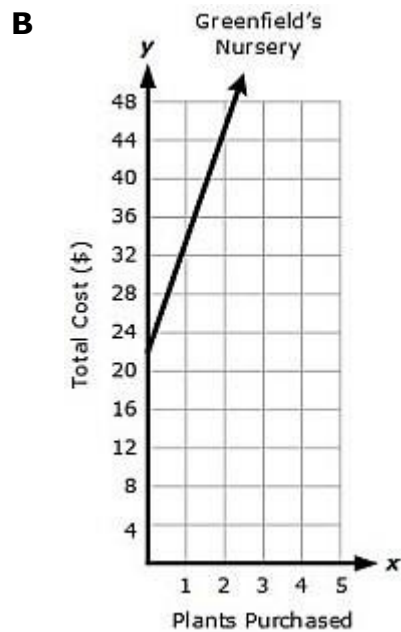
J



- 9 Greenfields plant nursery delivers plants to its customers. The nursery sells plants for \$12 each, and there is a total delivery charge of \$22. Which of the following best represents the relationship between the number of plants purchased, x , and the total price, y ?

A

x	y
1	12
2	24
3	36
4	48
5	60



C $y = 22x + 12$

D Not here