

Name _____

Key

PRACTICE

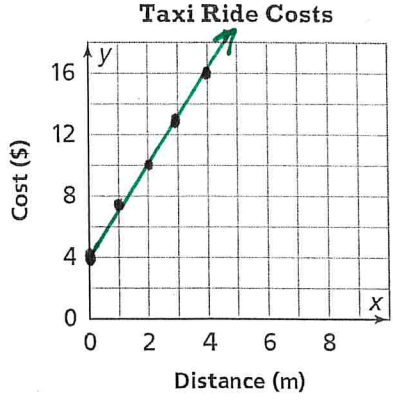
Topic 2
Assessment
Form B

1. A taxi ride costs \$4, plus an additional \$3 per mile.

$y = 3x + 4$

Fill in the table of values and then graph the line relating the taxi ride costs to distance (in miles) using your table of values.

x (m)	y (\$)
0	4
1	7
2	10
3	13
4	16



2. What is the solution to the equation

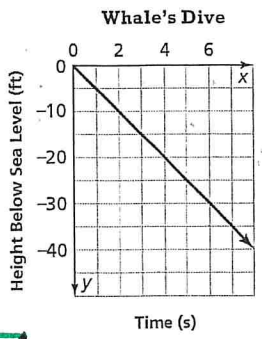
$$-3(x - 4) = -3x + 4$$

$$\begin{array}{r} -3x + 12 = -3x + 4 \\ +3x \quad \quad +3x \end{array}$$

$12 = 4$

No Solution

3. Select all the statements that are true for the graph shown.



$m = -5$
 $y = mx + b$
 $y = -5x$

- The relationship is proportional.
- The slope is 5.
- The slope is positive.
- The y-intercept is 0.
- The equation of the line is $y = -5x$.

4. What is the solution to the equation

$$3x - 7 = 14$$

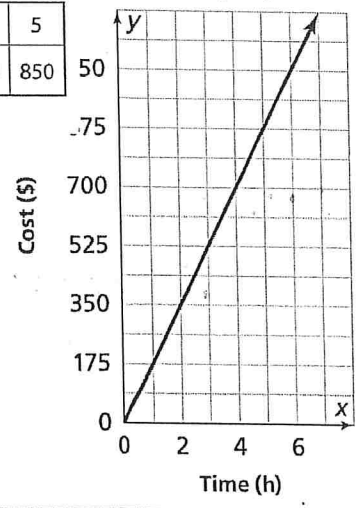
$$\begin{array}{r} +7 \quad +7 \\ \hline 3x = 21 \\ \hline \frac{3x}{3} = \frac{21}{3} \end{array}$$

$x = 7$

5. Maureen is in charge of renting a climbing wall. The equation $y = 170x$ represents the total cost of renting a climbing wall from Company A. The table shows the relationship between cost and rental time for Company B. The graph shows the relationship for Company C. Which company, if any, offers the best deal? Explain.

Company B				
Time (h)	2	3	4	5
Cost (\$)	340	510	680	850

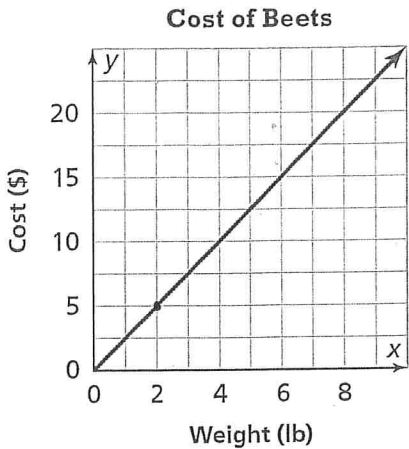
Company C



Company A
 $y = 170x$
Company B
 $y = 170x$
Company C
 $y = 175x$

* Company A and Company B both have the best deal at \$170 per hour.

6. The graph shows the cost of buying beets at a farm stand.



Part A

What is the slope of the line?

$m = \frac{5}{2}$ or 2.5

Part B

Abby says the graph shows that beets cost \$0.40 per pound. Is she correct? Explain.

No, the beets cost \$2.50 per pound

7. What is the solution to the equation

$-2x - 4 + 3x = 6x + 11$

$$\begin{array}{r} x - 4 = 6x + 11 \\ -x \quad -x \\ \hline -4 = 5x + 11 \\ -11 \quad -11 \\ \hline -15 = 5x \\ \frac{-15}{5} = \frac{5x}{5} \end{array}$$

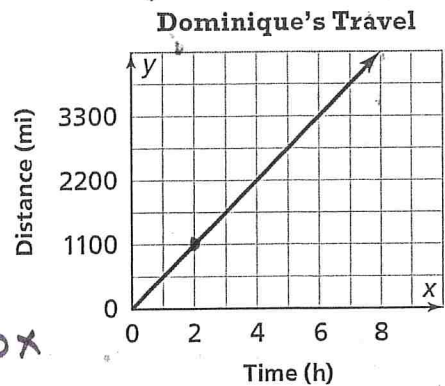
$x = -3$

8. Find the slope of the line that goes through the points (1, -5) and (6, 10).

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{10 - (-5)}{6 - 1} = \frac{15}{5} = 3$$

$m = 3$ or $\frac{3}{1}$

9. Dominique and Ella are comparing whose jet traveled faster. The graph shows the relationship between the total distance Dominique traveled and the time in hours. The distance Ella traveled after x hours can be represented by the equation $y = 550x$.



Ella
 $y = 550x$

Dominique
 $y = \frac{1100}{2}$
 $= 550$
 $y = 550x$

Who, if anyone, traveled at a faster speed? Explain.

* Both Ella and Dominique's jets travelled at the same rate, which was 550 mph

10. A music shop charges a deposit of \$20, plus a monthly rate of \$30 to rent an instrument. For how many months did Avi rent an instrument if he spent a total of \$80?

- 2 months
- A. 2 months C. 4 months
B. 3 months D. 5 months

$$\begin{array}{r} y = 30x + 20 \\ 80 = 30x + 20 \\ -20 \quad -20 \\ \hline 60 = 30x \\ \frac{60}{30} = \frac{30x}{30} \\ x = 2 \end{array}$$