

1. For each equation, find y when $x = -3$. Then find x when $y = 2$

a. $y = 6x + 8$

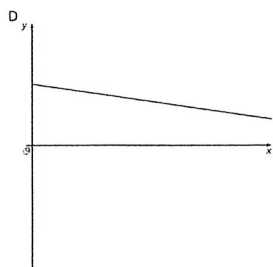
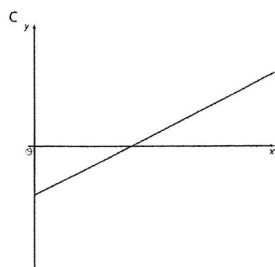
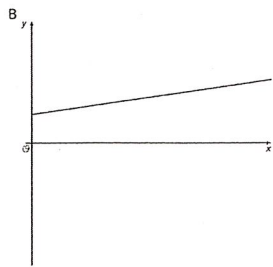
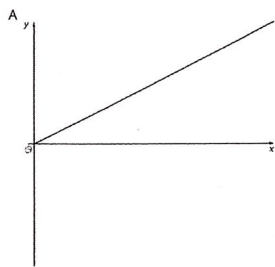
b. $y = \frac{2}{3}x$

c. $y = -x + 5$

d. $y = \frac{3}{4}x - 2\frac{1}{2}$

e. $y = 1.5x + 11$

2. Match each graph of a linear relationship to a situation that most reasonably reflects its context.



1. y is the weight of a kitten x days after birth.

2. y is the distance left to go in a car ride after x hours of driving at a constant rate toward its destination.

3. y is the temperature, in degrees C, of a gas being warmed in a laboratory experiment.

4. y is the amount of calories consumed eating x crackers.

3. True or false: The points $(6, 13)$, $(21, 33)$, and $(99, 137)$ all lie on the same line. The equation of the line is $y = \frac{4}{3}x + 5$. Explain or show your reasoning.

4. Here is a linear equation: $y = \frac{1}{4}x + \frac{5}{4}$

a. Are $(1, 1.5)$ and $(12, 4)$ solutions to the equation? Explain or show your reasoning.

b. Find the x -intercept of the graph of the equation. Explain or show your reasoning.

5. Find the coordinates of B , C , and D given that $AB = 5$ and $BC = 10$.

