Name _____

Topic **2**
Assessment
Form A

1. Cecile packages snack mix at a health food store. She uses $\frac{1}{3}$ of her supply of sunflower seeds to make a salted snack mix and $\frac{2}{9}$ of her supply to make an unsalted snack mix. If Cecile uses 10 pounds of sunflower seeds, how many pounds of seeds are in her supply?

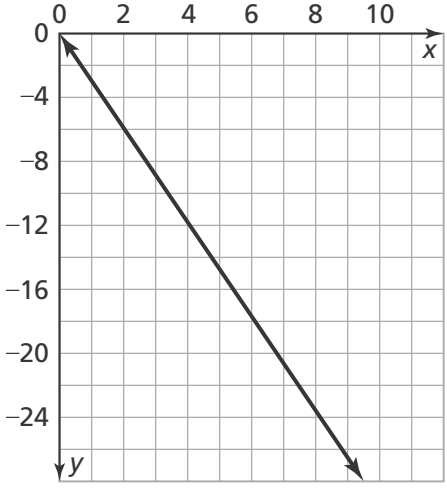
Ⓐ 18 pounds

Ⓑ 23 pounds

Ⓒ 30 pounds

Ⓓ 40 pounds

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



☐ The relationship is proportional.

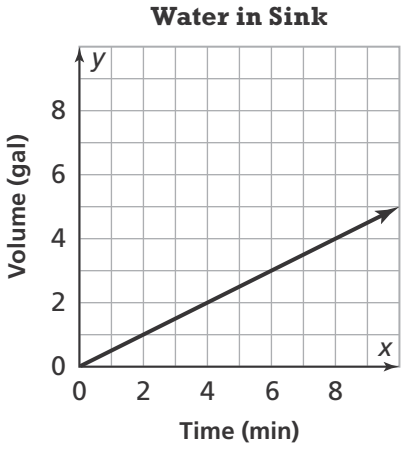
☐ The rate of change is $-\frac{3}{2}$

☐ The rate of change is $-\frac{8}{3}$

☐ The equation of the line is $y = -3x$

☐ The relationship is linear.

3. The graph shows the volume of water in a sink x minutes after the faucet is turned on.



Part A

What is the slope of the line?

Part B

Connor says the graph shows that water is flowing at a rate of 2 gallons per minute. Is he correct? Explain.

4. What is the solution to the equation $-0.2(x - 20) = 44 - x$?

Ⓐ $x = -90$

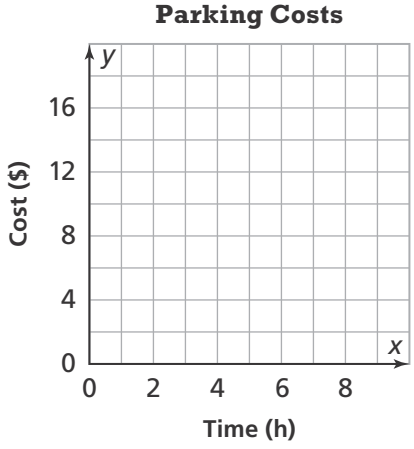
Ⓑ $x = -50$

Ⓒ $x = 50$

Ⓓ $x = 90$

5. A public parking garage charges $5, plus an additional $2 per hour.

Graph the line relating parking costs to time (in hours).

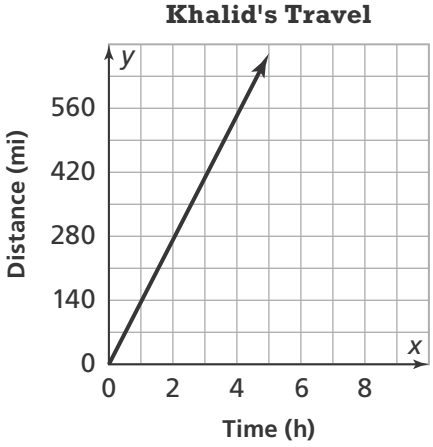


6. Match each equation to its number of solutions.

	One solution	No solution	Infinitely many solutions
$-2(3x - 1) = -6x - 1$	❑	❑	❑
$2(3x - 1) = 6x - 2$	❑	❑	❑
$2(3x - 1) = -6x - 2$	❑	❑	❑

7. Solve the equation $\frac{2}{3}x - \frac{1}{5}x = x - 1$.

8. Khalid and Jesse took different overnight trains. The graph shows the relationship between the total distance Khalid traveled and the time in hours. The distance Jesse traveled after x hours is given by the equation $y = 150x$.



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

9. Maria is renting kayaks from a local shop that charges a $10 fee, plus an hourly rate of $7.50. For how long can Maria rent the kayak if she pays a total of $70?

Ⓐ 6 hours
Ⓑ 7 hours
Ⓒ 8 hours
Ⓓ 9 hours