

Lesson 18 Practice Problems

1. A car is traveling down a road at a constant speed of 50 miles per hour.

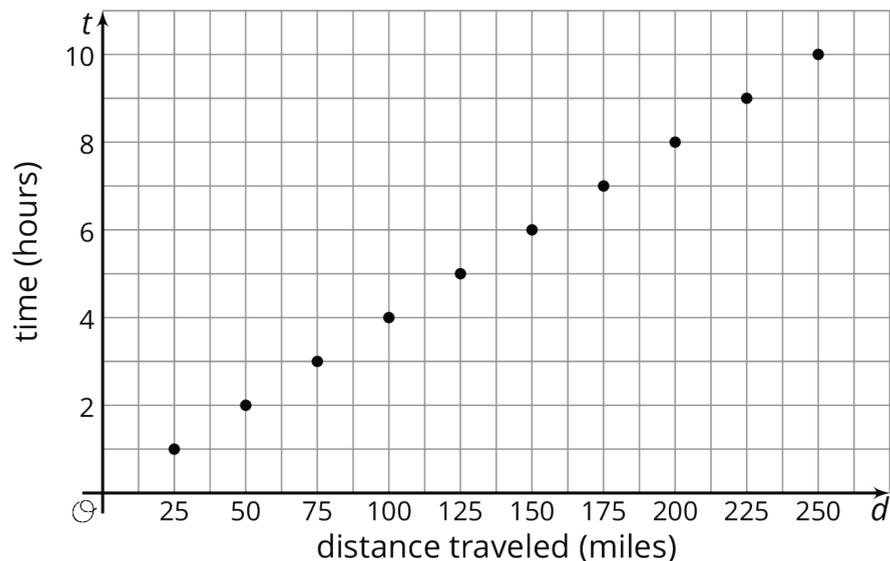
a. Complete the table with the amounts of time it takes the car to travel certain distances, or the distances traveled for certain amounts of time.

time (hours)	distance (miles)
2	
1.5	
t	
	50
	300
	d

b. Write an equation that represents the distance traveled by the car, d , for an amount of time, t .

c. In your equation, which is the dependent variable and which is the independent variable?

2. The graph represents the amount of time in hours it takes a ship to travel various distances in miles.



a. Write the coordinates of one point on the graph. What does the point represent?

b. What is the speed of the ship in miles per hour?

c. Write an equation that relates the time, t , it takes to travel a given distance, d .

3. Find a solution to each equation in the list that follows (not all numbers will be used):

a. $2^x = 8$

b. $2^x = 2$

c. $x^2 = 100$

d. $x^2 = \frac{1}{100}$

e. $x^1 = 7$

f. $2^x \cdot 2^3 = 2^7$

g. $\frac{2^x}{2^3} = 2^5$

List: $\frac{1}{10}$ $\frac{1}{3}$ 1 2 3 4 5 7 8 10 16

(From Unit 4, Lesson 16.)

4. Select **all** the expressions that are equivalent to $5x + 30x - 15x$.

A. $5(x + 6x - 3x)$

B. $(5 + 30 - 15) \cdot x$

C. $x(5 + 30x - 15x)$

D. $5x(1 + 6 - 3)$

E. $5(x + 30x - 15x)$

(From Unit 4, Lesson 10.)

5. Evaluate each expression if x is 1, y is 2, and z is 3.

a. $7x^2 - z$

b. $(x + 4)^3 - y$

c. $y(x + 3^3)$

d. $(7 - y + z)^2$

e. $0.241x + x^3$

(From Unit 4, Lesson 16.)