

Student: _____
Date: _____

Instructor: Deb Wertz
Course: MAP102 MASTER

Assignment: Homework #16

1. Solve the equation for y.

$$x + y = 9$$

y = _____

2. One number is 2 times a first number. A third number is 100 more than the first number. If the sum of the three numbers is 208, find the numbers.

The three numbers are _____. (Use a comma to separate answers as needed.)

3. Solve the formula for the specified variable.

$$y = dg \text{ for } d$$

d = _____

4. Solve $7x - 6y = 19$ for y.

y = _____ (Use integers or fractions for any numbers in the expression.)

5. Solve $P = 2G + 2M$ for G.

G = _____

6. A woman works at a law firm in city A which is about 70 miles from city B. She must go to the law library in city B to get a document. Find how long it takes her to drive round-trip if she averages 50 mph.

Translate the sentence into an equation. Use the distance formula, $d = rt$, where d = distance traveled, r = rate, and t = time. Fill in the blanks below.

Distance (round-trip)	equals	rate or speed	•	time
↓		↓		↓
_____	=	_____	•	t

What is the first step in solving the resulting equation for t ?

- A. Add 50 to both sides of the equation.
- B. Multiply both sides of the equation by 50.
- C. Divide both sides of the equation by 50.
- D. Subtract 50 from both sides of the equation.

Divide both sides of the equation by 50 and simplify.

$$140 = 50t$$

$$\frac{140}{50} = \frac{50t}{50}$$

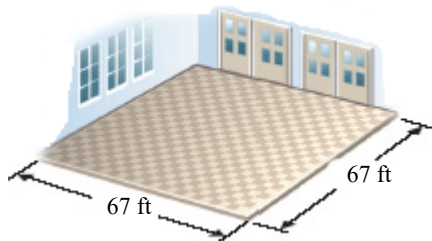
$$2.8 = t$$

(Type an integer or a decimal.)

Interpret the result.

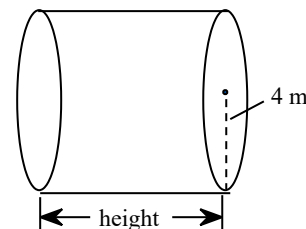
It takes her approximately _____ hours and _____ minutes to drive round-trip.
(Type a whole number.)

7. A package of floor tiles contains 26 one-foot-square tiles. Find how many packages should be bought to cover a square ballroom floor whose side measures 67 feet. Note: Partial packages cannot be bought.



_____ packages should be bought to cover the floor.

8. The formula for the volume of a cylinder is $V = \pi r^2 h$. The cylinder to the right has an exact volume of 480π cubic meters. Find its height.

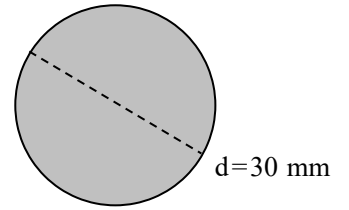


The height of the cylinder is _____ (1) _____
(Simplify your answer.)

- (1) m.
 sq m.
 cu m.

9.

The formula for the volume of a sphere is $V = \frac{4}{3}\pi r^3$, where r is the radius of the sphere. The steel ball to the right is in the shape of a sphere and has a diameter of 30 millimeters.



- a. Find the exact volume of the sphere.
b. Find a 2-decimal-place approximation for the volume.

a. The exact volume of the sphere is _____ (1) _____
(Simplify your answer. Type an exact answer, using π as needed.)

b. The 2-decimal-place approximation for the volume is _____ (2) _____
(Type an integer or decimal rounded to two decimal places as needed.)

- (1) mm. (2) sq mm.
 cu mm. mm.
 sq mm. cu mm.

1. $9 - x$

2. 54,27,127

3. $\frac{y}{g}$

4. $\frac{7x - 19}{6}$

5. $\frac{P - 2M}{2}$

6. 140

50

C. Divide both sides of the equation by 50.

2.8

2

48

7. 173

8. 30

(1) m.

9. 4500π

(1) cu mm.

14,137.17

(2) cu mm.
