

**HW - Writing and Solving Equations Practice**

*Define the variable, write an equation, and solve each equation.*

1. A gardening expert recommends that flower bulbs be planted to a depth of three times their height. Suppose Jenna determines that a certain bulb should be planted at a depth of 4.5 inches. Write and solve an equation to find the height of the bulb.
  - 1) Define the variable.
  - 2) Write an equation.
  - 3) Solve the equation.
  
2. A survey of teens showed that teens in Pittsburgh aged 12-17 spend 15.8 hours per week online. Teens in Miami/Ft. Lauderdale spend 14.2 hours per week online. Write and solve an equation to find the difference in time spent online by teens in these cities.
  - 1) Define the variable.
  - 2) Write an equation.
  - 3) Solve the equation.
  
3. The speed limit on an Arizona highway is 75 miles per hour. Suppose a truck traveling at the speed limit drives 225 miles before the driver stops for a break. Solve an equation to find the length of time the truck has traveled.
  - 1) Define the variable.
  - 2) Write an equation.
  - 3) Solve the equation.

Name: \_\_\_\_\_

ID: A

*Solve each equation.*

4.  $72 = 12x$

5.  $29 = 16 + x$

6.  $67.62 = 9.8x$

7.  $10 = \frac{x}{4}$

8.  $39 = x - 10$

9.  $\frac{x}{12.8} = 7.1$

10.  $39.15 = 13.5x$

11.  $4.5 = \frac{x}{19.3}$

12.  $x - 7.8 = 2.8$

13.  $\frac{x}{4} = 10$

14.  $9.6 + x = 39.9$

15.  $x - 17 = 15$

## HW - Writing and Solving Equations Practice Answer Section

### SHORT ANSWER

1.  $h$  = height of the bulb  
 $3h = 4.5$   
 $h = 1.5$  inches
2.  $t$  = difference in time spent online  
 $14.2 + t = 15.8$   
 $t = 1.6$  hours
3.  $t$  = time (hours)  
 $75t = 225$   
 $t = 3$  hours

### NUMERIC RESPONSE

4. 6
5. 13
6. 6.9
7. 40
8. 49
9. 90.88
10. 2.9
11. 86.85
12. 10.6
13. 40
14. 30.3
15. 32