

Unit 3: Solving Equations
One and Two-step Homework

Name Key
Date _____ Period C

1. Tisha wants to go to Corpus Christi this weekend. She plans to drive 50 miles per hour. Her distance can be calculated by using the equation $d = 50t$, where d is the distance she travels and t is the time in hours. If Corpus Christi is 125 miles away, how long will it take her to get there?

Picks
2

$$\begin{array}{r|l} d = 50t & \\ 125 = 50t & \\ \hline 50 & 50 \\ \hline 2.5 = t & \end{array}$$

2.5 hours

2. Justin works at Burger World and earns \$5.25 per hour. How many hours will it take for him to earn \$42?

y = earnings
x = hours

$$\begin{array}{r|l} y = 5.25x & \\ 42 = 5.25x & \\ \hline 5.25 & 5.25 \\ \hline 8 = x & \end{array}$$

8 hours

3. The cost to repair Briana's car is \$156 for parts plus \$52 per hour. If her bill was \$310, how many hours did the mechanic work on Briana's car?

$$\begin{array}{r|l} C = 156 + 52h & \\ 310 = 156 + 52h & \\ \hline -156 & -156 \\ \hline 154 = 52h & \\ \hline 52 & 52 \\ \hline 2.96 = h & \end{array}$$

about 3 hours

4. $k + 11 = -21$

$$\begin{array}{r|l} k + 11 = -21 & \\ -11 & -11 \\ \hline k = -32 & \end{array}$$

5. $-12 + z = -36$

$$\begin{array}{r|l} -12 + z = -36 & \\ +12 & +12 \\ \hline z = -24 & \end{array}$$

6. $3w = -11$

$$\begin{array}{r|l} 3w = -11 & \\ \hline w = -\frac{11}{3} & \end{array}$$

7. $\frac{1}{5}x = 11$

$$\begin{array}{r|l} \frac{1}{5}x = 11 & \\ \cdot \frac{5}{5} & \cdot \frac{5}{5} \\ \hline x = 55 & \end{array}$$

8. $4x - 81 = 225$

$$\begin{array}{r|l} 4x - 81 = 225 & \\ +81 & +81 \\ \hline 4x = 306 & \\ \hline \frac{4x}{4} = \frac{306}{4} & \\ \hline x = 76.5 & \end{array}$$

9. $87.6 = 8.8 - 0.2z$

$$\begin{array}{r|l} 87.6 = 8.8 - 0.2z & \\ -8.8 & -8.8 \\ \hline 78.8 = -0.2z & \\ \hline -0.2 & -0.2 \\ \hline -394 = z & \end{array}$$

Picks
3

Find the number described in each problem by writing and solving an equation.

pride
3

10. If Jan adds 5 times her number to 75, she gets 120. What is Jan's number?

$$\begin{array}{r} 75 + 5n = 120 \\ -75 \quad -75 \\ \hline 5n = 45 \\ \frac{5n}{5} = \frac{45}{5} \\ n = 9 \end{array}$$

$n = 9$

11. Twice Bob's number subtracted from 36 is 72. What is Bob's number?

$$\begin{array}{r} 36 - 2n = 72 \\ -36 \quad -36 \\ \hline -2n = 36 \\ \frac{-2n}{-2} = \frac{36}{-2} \\ n = -18 \end{array}$$

$n = -18$

12. The sum of (3 times a number and 17) is 5. What is the number?

$$\begin{array}{r} 3n + 17 = 5 \\ -17 \quad -17 \\ \hline 3n = -12 \\ \frac{3n}{3} = \frac{-12}{3} \\ n = -4 \end{array}$$

$n = -4$

13. If Don subtracts 24 from one-half of his number he gets 0. What is Don's number?

$$\begin{array}{r} \frac{1}{2}n - 24 = 0 \\ +24 \quad +24 \\ \hline \frac{1}{2}n = 24 \\ 2 \cdot \frac{1}{2}n = 24 \cdot 2 \\ n = 48 \end{array}$$

$n = 48$

14. Twelve decreased by twice a number is -7. What is the number?

$$\begin{array}{r} 12 - 2n = -7 \\ -12 \quad -12 \\ \hline -2n = -19 \\ \frac{-2n}{-2} = \frac{-19}{-2} \\ n = \frac{19}{2} \text{ or } 9.5 \end{array}$$

$n = \frac{19}{2} \text{ or } 9.5$

15. The sum of (4 times a number and 14) is 16. What is the number?

$$\begin{array}{r} 4n + 14 = 16 \\ -14 \quad -14 \\ \hline 4n = 2 \\ \frac{4n}{4} = \frac{2}{4} \\ n = \frac{1}{2} \end{array}$$

$n = \frac{1}{2}$