

**Section 1.1 Things to Know:**

- Translating between words and expressions
- Evaluating expressions

**Give two ways to write each algebraic expression in words.**

1.  $j - 3$   $j$  minus 3  
3 less than  $j$

2.  $4p$  4 times  $p$   
the product of 4 and  $p$

3. Mark is 5 years older than Juan, who is  $y$  years old. Write an expression for Mark's age.

$y + 5$

**Evaluate each expression for  $c = 6$ ,  $d = 5$ , and  $e = 10$**

4.  $\frac{d}{e} = \frac{5}{10} = \frac{1}{2}$

6.  $d - c = 5 - 6 = -1$

5.  $c + d = 6 + 5 = 11$

7.  $(-c)(-d)(-e)$   
 $(-6)(-5)(-10)$   
 $-300$

8. Shemika practices basketball for 2 hours each day.  
a. Write an expressions for the number of hours she practices in  $d$  days.

$2d$

b. Find the number of hours she practices in 5, 12, and 20 days.

$2(5) = 10$  hours  
 $2(12) = 24$  hours  
 $2(20) = 40$  hours

**Section 1.2 Things to Know**

- Solving one-step equations using addition and subtraction
- Writing and solving one-step equations using addition and subtraction from word problems.

9.  $r - 4 = -8$

$$r = -4$$

12.  $0.75 = n + 0.6$

$$.15 = n$$

10.  $\frac{5}{12} = s - \frac{11}{12}$

$$\frac{16}{12} = s$$

$$4\frac{1}{3}$$

13.  $-5 + c = 22$

$$c = 27$$

11.  $m + 13 = 58$

$$m = 45$$

14.  $7 + y = 4$

$$y = -3$$

15. This year a high school had 578 sophomores enrolled. This is 89 less than the number enrolled last year. Write and solve an equation to find the number of sophomores enrolled last year.

$$578 = n - 89$$

$$667 = n$$

667 sophomores

### Section 1.3 Things to Know

- Solving one-step equations using multiplication and division
- Writing and solving one-step equations using multiplication and division from word problems.

16.  $-3 = \frac{m}{-7}$

$m = 21$

19.  $126 = -9y$

$y = -14$

17.  $\frac{x}{100} = 0.028$

$x = 2.8$

20.  $\frac{2}{3}m = 16$   $\frac{5}{2}$

$m = 40$

18.  $8y = 4$

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

21.  $\frac{15}{16}c = \frac{25}{48}$   $\frac{14}{3}$   $= \frac{5}{9}$

22. A person's weight on Venus is about  $\frac{9}{10}$  his or her weight on Earth. Write and solve an equation to find out how much a person weighs on Earth if he or she weighs 108 pounds on Venus.

Venus =  $\frac{9}{10}$  (Earth)

$\frac{10}{9} \cdot 108 = \frac{9}{10} x$

$120 = x$

120 pounds

**Multiple Choice Practice.**

23. Which expression shows 3 less than  $x$ ?

A  $3 - x$

C  $x - 3$

B  $3x$

D  $\frac{x}{3}$

24. Solve  $-12 = \frac{w}{-4}$ .

F  $-48$

H  $3$

G  $-3$

J  $48$

25. Solve  $5 + h = -6$ .

F  $-11$

H  $1$

G  $-1$

J  $11$

26. Solve  $-3y = -12$ .

A  $-15$

C  $4$

B  $-9$

D  $36$

27. Solve  $-\frac{7}{8} = m - \frac{3}{8}$ .

A  $-\frac{5}{4}$

C  $\frac{1}{2}$

B  $-\frac{1}{2}$

D  $\frac{5}{4}$

28. Solve  $-\frac{4}{5}x = -2$ .

F  $-\frac{5}{2}$

H  $\frac{8}{5}$

G  $-\frac{8}{5}$

J  $\frac{5}{2}$

$\frac{5}{4}$   $\frac{16}{4}$