

# Chapter 3 Study Guide ANSWERS

## 3.1 Practice A

- terms: 3,  $c$ ,  $e$   
coefficients: 1, 1  
constant: 3
- terms:  $5m$ , 9  
coefficient: 5  
constant: 9
- terms:  $3p^2$ , 7  
coefficient: 3  
constant: 7
- 42
- 10
- 9
- 100
- 6
- 19
- 4
- 180
- 10
- 13
- 17
- 6
- $3 \cdot 10 = 30$  should be done first. So,  $30 - 6 = 24$ .
- \$26.00
- 322 problems
- a. \$60.00    b. yes; 24 times \$5 is \$120.
- a. 78 pages    b. no; 2 times 52 is only 104 pages.

## 3.2 Practice A

- $4 + 6$  or  $6 + 4$
- $15 - 7$
- $3x$  or  $x \cdot 3$
- $\frac{m}{4}$
- $8p$  or  $p \cdot 8$
- $2x$  or  $x \cdot 2$
- $y - 10$
- $k - 7$
- $3 + c$  or  $c + 3$
- $11 - d$
- Twelve less than a number means that you must subtract 12 from the number  $x$ ;  $x - 12$
- 8 more than a number  $x$ , or the total of a number  $x$  and 8
- 20 decreased by the number  $n$ , or  $n$  less than 20
- $5x + 12$ ; 22
- $\frac{x}{3 + 7}$ ;  $\frac{1}{5}$
- $\frac{200}{y} - 17$ ; 3
- $15 - 4x$ ; 7
- $5 - 2$
- a.  $3x + 2$  or  $2 + 3x$   
b.  $3 \times 12 + 2$  or 38 years old

# Chapter 3 Study Guide ANSWERS (cont.)

## Answers

### 3.3 Practice A

- Commutative Property of Addition
- Addition Property of Zero
- Commutative Property of Multiplication
- Associative Property of Multiplication
- Multiplication Property of One
- Associative Property of Addition
- $2 + (a + 8) = 2 + (8 + a)$  Commutative Property of Addition  
 $= (2 + 8) + a$  Associative Property of Addition  
 $= 10 + a$  Add 2 and 8.
- $(2x) \cdot 5 = 5 \cdot (2x)$  Commutative Property of Multiplication  
 $= (5 \cdot 2) \cdot x$  Associative Property of Multiplication  
 $= 10x$  Multiply 5 and 2.
- $7(4y) = (7 \cdot 4)y$  Associative Property of Multiplication  
 $= 28y$  Multiply 7 and 4.
- $(0 + c) + 12 = (c + 0) + 12$  Commutative Property of Addition  
 $= c + (0 + 12)$  Commutative Property of Addition  
 $= c + 12$  Addition Property of Zero
- $(8e) \cdot 1 = 1 \cdot (8e)$  Commutative Property of Multiplication  
 $= (1 \cdot 8) \cdot e$  Associative Property of Multiplication  
 $= 8e$  Multiplication Property of One
- $7 \cdot x \cdot 5 = 7 \cdot (x \cdot 5)$  Associative Property of Multiplication  
 $= 7 \cdot (5 \cdot x)$  Commutative Property of Multiplication  
 $= (7 \cdot 5) \cdot x$  Associative Property of Multiplication  
 $= 35x$  Multiply 7 and 5.
- $7 + a$
- $(6 + 9) + 7$
- $5 \cdot 12$
- $(2 \cdot 5) \cdot 7$

17.  $54 \cdot 1 = 54$ ; Any number times one equals itself.

18.  $x + y + 20$   
 $y + x + 20$

### 3.4 Practice A

- 115
- 150
- 486
- 413
- $\frac{1}{3} \left( 2 + \frac{3}{4} \right) = \frac{11}{12}$
- $\frac{2}{5} \left( 3 + \frac{1}{2} \right) = 1\frac{2}{5}$
- $\frac{3}{8} \left( 5 + \frac{2}{3} \right) = 2\frac{1}{8}$
- $4x + 24$
- $8c - 40$
- $14y + 56$
- $9e - 36$
- $24 + 6n$
- $21 + 7x + 28 = 7x + 49$
- 5 must be multiplied by both  $x$  and 9;  $5x + 45$
- C; You need to add the two activities and then multiply the sum by 5.
- $5(r + 3) = 5r + 15$
- $9w + 54 + 4 = 9w + 58$
- $15 + 5m - 7 = 5m + 8$
- $11m + 7$
- $5f - 8$
- $1\frac{7}{8}x$
- $3.1p - 8.37$
- area:  $5(x + 2) = 5x + 10$   
 perimeter:  $2(5) + 2(x + 2) = 2x + 14$