

Name: _____

Date: _____

Lesson 7.2 Evaluating Algebraic Expressions

Evaluate each expression for the given value of the variable.

1. $6x + 7$ when $x = 5$

= _____

2. $9y - 10$ when $y = 3$

= _____

3. $14g - 98 + 3g$ when $g = 7$

= _____

4. $6h + 25 - \frac{5h}{4}$ when $h = 8$

= _____

5. $50 - \frac{7w}{3} + 4w$ when $w = 6$

= _____

6. $10p - \frac{3p-2}{4} + 5$ when $p = 10$

= _____

Evaluate each expression when $p = 4$.

7. $3(5p - 1) - 4(3p - 7)$

= _____

8. $3(5p - 6) + 4(20 - 3p)$

= _____

Evaluate each expression when $r = 9$.

9. $5(10r + 3) - 7r$

= _____

10. $4(5r - 3) - 2(6r - 7)$

= _____

Evaluate each expression for the given value of the variable.

11. $\frac{6p+4}{7} + \frac{5p-6}{2} - \frac{3p}{4}$ when $p = 4$

= _____

12. $\frac{3(y-2)}{4} + \frac{4(2y-3)}{5}$ when $y = 6$

= _____

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Evaluate each of the following.

13. Subtract 60 from the sum of $8e$ and 20 when $e = 7$.

14. Find the product of $(2z + 1)$ and $(3z - 6)$ when $z = 4$.

15. $3(w^2 - 5w + 4)$ subtracted from $5(3w + 2)$ when $w = 6$.

16. The sum of $2(3y + 8)$ and $5(40 - 4y)$ when $y = 9$.

17. The sum of $\frac{3}{4}(m + 4)$ and $\frac{5}{6}(m - 6)$ when $m = 12$.

18. The quotient of $(5x + 1)$ and $(2x - 5)$ when $x = 7$.

19. The value of $\frac{x + 3}{x - 1} + \frac{4x - 5}{2x + 5} - \frac{6x - 25}{x}$ when $x = 5$.

Chapter 7

Lesson 7.1

- $k + 8$
- $10 - y$
- $7g$
- $\frac{h}{8}$ or $\frac{1}{8}h$
- $5w - 6$
- $7z + 10$
- $4h - 10$
- $\frac{s}{9} + 5$ or $5 + \frac{s}{9}$
- $\frac{6y}{7}$
- $4 \times 4 - \frac{h}{3}$ or $16 - \frac{h}{3}$
- $(p - 10)$ stickers
 - $3p$ stickers
 - $(p + 6)$ stickers
 - $\frac{2p}{5}$ stickers
- $(6g + 10)$ seashells
- $(2b - 6)$ dollars
- $\frac{50}{x + 2}$ loaves of bread
- 3 units $\rightarrow 12y$
 1 unit $\rightarrow 12y \div 3 = 4y$
 5 units $\rightarrow 5 \times 4y = 20y$
 20y silver guppies
- $(\frac{4p}{3} - 5)$ years old
- $(y^2 + 2y)$ square centimeters

Lesson 7.2

- $6 \cdot 5 + 7 = 37$
- $9 \cdot 3 - 10 = 17$
- $14 \cdot 7 - 98 + 3 \cdot 7 = 21$
- $6 \cdot 8 + 25 - 5 \cdot 8 \div 4 = 63$
- $50 - \frac{7 \cdot 6}{3} + 4 \cdot 6 = 60$
- $10 \cdot 10 - \frac{3 \cdot 10 - 2}{4} + 5 = 98$
- $3(5 \cdot 4 - 1) - 4(3 \cdot 4 - 7) = 37$
- $3(5 \cdot 4 - 6) + 4(20 - 3 \cdot 4) = 74$
- $5(10 \cdot 9 + 3) - 7 \cdot 9 = 402$
- $4(5 \cdot 9 - 3) - 2(6 \cdot 9 - 7) = 74$
- $\frac{6 \cdot 4 + 4}{7} + \frac{5 \cdot 4 - 6}{2} - \frac{3 \cdot 4}{4} = 8$
- $\frac{3(6 - 2)}{4} + \frac{4(2 \cdot 6 - 3)}{5} = 10\frac{1}{5}$
- $8e + 20 - 60 = 8 \cdot 7 + 20 - 60 = 16$
- $(2 \cdot 4 + 1)(3 \cdot 4 - 6) = 54$
- $5(3w + 2) - 3(w^2 - 5w + 4)$
 $= 5(3 \cdot 6 + 2) - 3(6 \cdot 6 - 5 \cdot 6 + 4)$
 $= 5 \cdot 20 - 3 \cdot 10 = 70$
- $2(3 \cdot 9 + 8) + 5(40 - 4 \cdot 9) = 90$
- $\frac{3}{4}(12 + 4) + \frac{5}{6}(12 - 6)$
 $= 12 + 5 = 17$

- $(5x + 1) \div (2x - 5)$
 $= (5 \cdot 7 + 1) \div (2 \cdot 7 - 5) = 4$
- $\frac{5 + 3}{5 - 1} + \frac{4 \cdot 5 - 5}{2 \cdot 5 + 5} - \frac{6 \cdot 5 - 25}{5} = 2$

Lesson 7.3

- $2x + 7$, coefficient 2
- $k - 3$, coefficient 1
- $10g$
- $3u$
- $11m$
- $16x$
- equivalent
- not equivalent
- not equivalent
- equivalent
- $4 + 3d$
- $8 + 10k$
- $6m + 5$
- $9 + n$
- u
- $12 + 5k$
- $5x + 7$
- $7r + 4$
- $5x + 5x + 3x + 3x + 3x = 19x$
 19x dollars
- $3z + 3z + 3z + 3z + 3z + 4z - 7$
 $= 19z - 7$
 (19z - 7) hours
- 30w centimeters
- Shanti: $5p$
 Jon: $10p$
 Ching: $10p - 16$
 Total = $25p - 16$
 (25p - 16) croissants
- $20x - 3x - 5 - 6x = 11x - 5$
 (11x - 5) dollars
- $4y + 3y + 9 + 5y + 7 = 12y + 16$
 (12y + 16) miles
- $4\left(\frac{5s - 2}{4}\right) = 5s - 2$
 (5s - 2) yards
 - $2(s + 9) + 2(3s - 5)$
 $= 2s + 18 + 6s - 10$
 $= 8s + 8$
 (8s + 8) yards
 - $(5s - 2) + (8s + 8)$
 $= 13s + 6$
 $13 \cdot 5 + 6 = 71$
 71 yards
 - $(8s + 8) - (5s - 2) = 3s + 10$
 $3 \cdot 7 + 10 = 31$
 31 yards

Lesson 7.4

- $12w + 15$
- $30 - 15y$
- $14a - 49$
- $27p + 45$
- $30 - 40d$
- $40r + 24$
- $7(y + 3)$
- $4(3 - k)$
- $6(3 - 2h)$
- $5(4w + 3)$
- $2(7 - 4x)$
- $3(8p - 5)$
- not equivalent
- equivalent
- equivalent
- not equivalent
- $29x + 13$
- $5k + 46$
- $76w + 17$
- $45 + 13g$