

The Distributive Property

Simplify each expression.

1) $6(1 - 5m)$

$6 - 30m$

2) $-2(1 - 5v)$

$-2 + 10v$

3) $3(4 + 3r)$

$12 + 9r$

4) $3(6r + 8)$

$18r + 24$

5) $4(8n + 2)$

$32n + 8$

6) $-(-2 - n)$

$2 + n$

7) $-6(7k + 11)$

$-42k - 66$

8) $-3(7n + 1)$

$-21n - 3$

9) $-6(1 + 11b)$

$-6 - 66b$

10) $-10(a - 5)$

$-10a + 50$

11) $-3(1 + 2v)$

$-3 - 6v$

12) $-4(3x + 2)$

$-12x - 8$

13) $(3 - 7k) \cdot -2$

$-6 + 14k$

14) $-20(8x + 20)$

$-160x - 400$

15) $(7 + 19b) \cdot -15$

$-105 - 285b$

16) $(x + 1) \cdot 14$

$14x + 14$

Evaluating Variable Expressions

Evaluate each using the values given.

1) $n^2 - m$; use $m = 7$, and $n = 8$

57

2) $8(x - y)$; use $x = 5$, and $y = 2$

24

3) $yx \div 2$; use $x = 7$, and $y = 2$

7

4) $m - n \div 4$; use $m = 5$, and $n = 8$

3

5) $x - y + 6$; use $x = 6$, and $y = 1$

11

6) $z + x^3$; use $x = 1$, and $z = 19$

20

7) $y + yx$; use $x = 15$, and $y = 8$

128

8) $q \div 6 + p$; use $p = 10$, and $q = 12$

12

9) $x + 8 - y$; use $x = 20$, and $y = 17$

11

10) $15 - (m + p)$; use $m = 3$, and $p = 10$

2

11) $10 - x + y \div 2$; use $x = 5$, and $y = 2$

6

12) $p - 2 + qp$; use $p = 7$, and $q = 4$

33

13) $zy + 4y$; use $y = 5$, and $z = 2$

30

14) $b(a + b) + a$; use $a = 9$, and $b = 4$

61

15) $p^2 \div 4 - m$; use $m = 3$, and $p = 4$

1

16) $x(y \div 3)^2$; use $x = 4$, and $y = 9$

36

17) $4 + m + n - m$; use $m = 4$, and $n = 9$

13

18) $qp + q - p$; use $p = 7$, and $q = 3$

17

19) $mn \div 6 + 10$; use $m = 7$, and $n = 6$

17

20) $h + j(j - h)$; use $h = 2$, and $j = 6$

26

21) $(b - 1)^2 + a^2$; use $a = 6$, and $b = 1$

36

22) $y(x - (9 - 4y))$; use $x = 4$, and $y = 2$

6

23) $x - (x - (x - y^3))$; use $x = 9$, and $y = 1$

8

24) $j(h - 9)^3 + 2$; use $h = 9$, and $j = 8$

2

Simplifying Variable Expressions

Simplify each expression.

1) $-3p + 6p$

$3p$

2) $b - 3 + 6 - 2b$

$-b + 3$

3) $7x - x$

$6x$

4) $7p - 10p$

$-3p$

5) $-10v + 6v$

$-4v$

6) $-9r + 10r$

r

7) $9 + 5r - 9r$

$9 - 4r$

8) $1 - 3v + 10$

$11 - 3v$

9) $5n + 9n$

$14n$

10) $4b + 6 - 4$

$4b + 2$

11) $35n - 1 + 46$

$35n + 45$

12) $-33v - 49v$

$-82v$

13) $30n + 8n$

$38n$

14) $7x + 31x$

$38x$

15) $10x + 36 - 38x - 47$

$-28x - 11$

16) $-2(7 - n) + 4$

$-10 + 2n$

17) $-8(-5b + 7) + 5b$

$45b - 56$

18) $-4p - (1 - 6p)$

$2p - 1$

19) $4 - 5(-4n + 3)$

$-11 + 20n$

20) $-7(k - 8) + 2k$

$-5k + 56$

21) $1 + 7(1 - 3b)$

$8 - 21b$

22) $3 - 8(7 - 5n)$

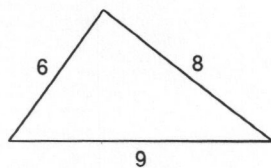
$-53 + 40n$

The Pythagorean Theorem

Date _____ Period _____

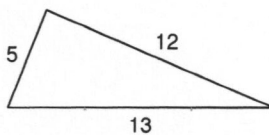
Do the following lengths form a right triangle?

1)



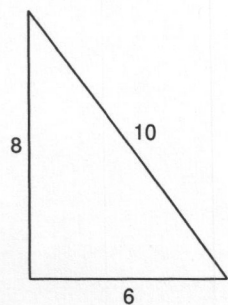
No

2)



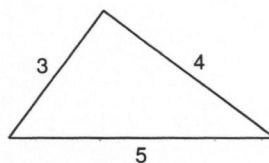
Yes

3)



Yes

4)



Yes

5) $a = 6.4$, $b = 12$, $c = 12.2$

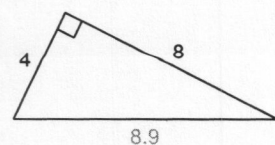
No

6) $a = 2.1$, $b = 7.2$, $c = 7.5$

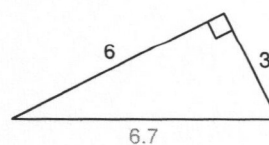
Yes

Find each missing length to the nearest tenth.

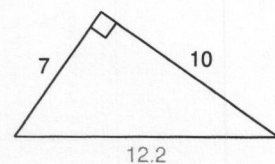
7)



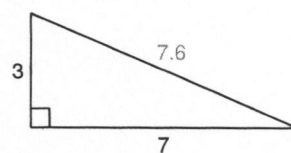
8)



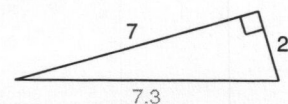
9)



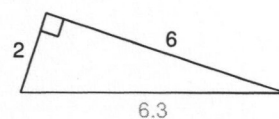
10)



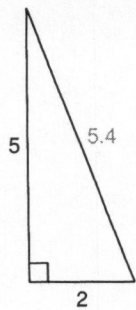
11)



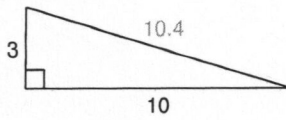
12)



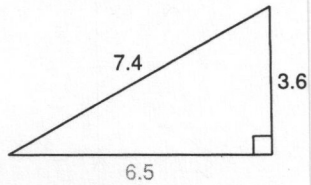
13)



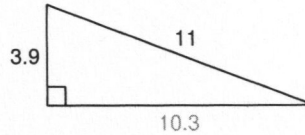
14)



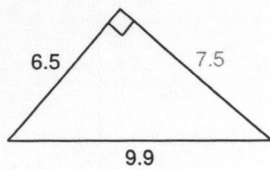
15)



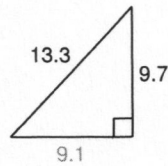
16)



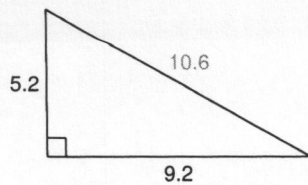
17)



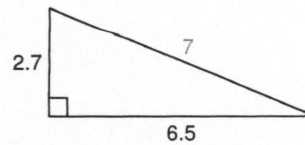
18)



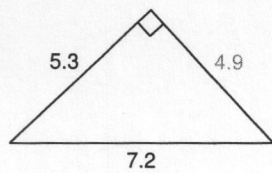
19)



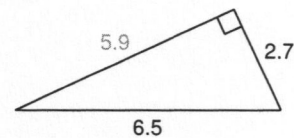
20)



21)



22)



Multi-Step Equations

Solve each equation.

1) $6a + 5a = -11$

$\{-1\}$

2) $-6n - 2n = 16$

$\{-2\}$

3) $4x + 6 + 3 = 17$

$\{2\}$

4) $0 = -5n - 2n$

$\{0\}$

5) $6r - 1 + 6r = 11$

$\{1\}$

6) $r + 11 + 8r = 29$

$\{2\}$

7) $-10 = -14v + 14v$

No solution.

8) $-10p + 9p = 12$

$\{-12\}$

9) $42 = 8m + 13m$

$\{2\}$

10) $a - 2 + 3 = -2$

$\{-3\}$

11) $18 = 3(3x - 6)$

$\{4\}$

12) $30 = -5(6n + 6)$

$\{-2\}$

$$13) 37 = -3 + 5(x + 6)$$
$$\{2\}$$

$$14) -13 = 5(1 + 4m) - 2m$$
$$\{-1\}$$

$$15) 4(-x + 4) = 12$$
$$\{1\}$$

$$16) -2 = -(n - 8)$$
$$\{10\}$$

$$17) -6(1 - 5v) = 54$$
$$\{2\}$$

$$18) 8 = 8v - 4(v + 8)$$
$$\{10\}$$

$$19) 10(1 + 3b) = -20$$
$$\{-1\}$$

$$20) -5n - 8(1 + 7n) = -8$$
$$\{0\}$$

$$21) 8(4k - 4) = -5k - 32$$
$$\{0\}$$

$$22) -8(-8x - 6) = -6x - 22$$
$$\{-1\}$$

$$23) 8(1 + 5x) + 5 = 13 + 5x$$
$$\{0\}$$

$$24) -11 - 5a = 6(5a + 4)$$
$$\{-1\}$$