Extra Problems

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1. Simplify without the use of a calculator.

    $-25 \times -4 =$

2. Evaluate without the use of a calculator.

    $(-9)^2 =$

3. Identify the property illustrated in the following problem.

    $(6+10)+8 = 6+(10+8)$

4. Simplify without the use of a calculator.

    $25 \div 5 + 2 \times 3^2 =$

5. Use the given values of the variables to find the value of the following expression.

    $10x + 5y,$ when $x = 5, y = -2$

6. Simplify.

$$x \cdot x^6 \cdot x^3 =$$

7. Simplify.

$$\frac{45x^5}{9x^3} =$$

8. Simplify without the use of a calculator.

$$(12)^0 =$$

9. Simplify without the use of a calculator.

$$64^{-\frac{1}{3}} =$$

10. Complete each ordered pair for the following equation.

$$x + 7y = 15$$
$$(1, \underline{})$$

Note: The angles and figures may not be drawn to scale.

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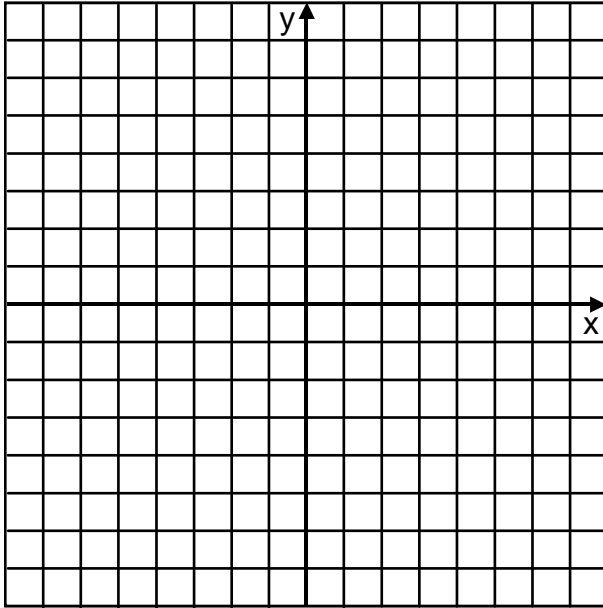11. Find the x and y intercepts of the given linear equation.

$x + 3y = 9$

12. Find the slope of the line that contains the following points using the slope formula.
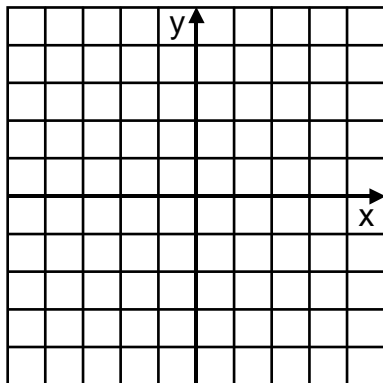
$(-7, 5)$ and $(5, -1)$

13. Graph the following linear equation.

$$y = -4x + 3$$

14. Find the equation of the line with the given point and slope. Graph the line.

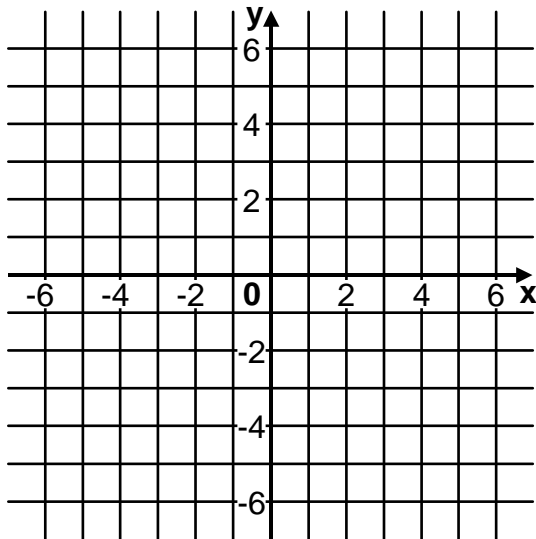$$m = \frac{3}{5}, \quad (-4,-4)$$

Extra Problems

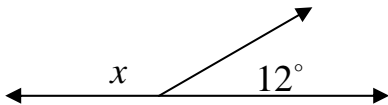15. Find the distance between the two given points to the nearest tenth.

    $(6,4)$ and $(-3,12)$

16. Graph the following equation.

    $(x+2)^2 + (y-2)^2 = 16$

17. Find x if the angles are supplementary.
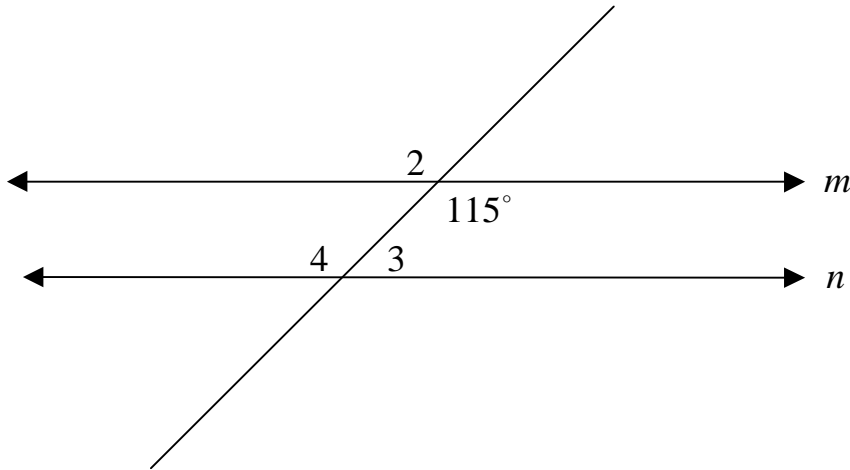
18. Convert the following decimal measure to DMS (Decimal Minutes Seconds).

    45.543

19. Given that lines *m* and *n* are parallel, find the measure of $\angle 2, \angle 3, \angle 4$ if
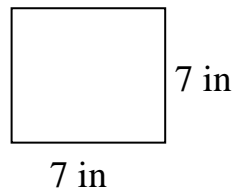

20. Find the length of the hypotenuse of a right triangle whose legs have lengths of 30 m and 40 m.

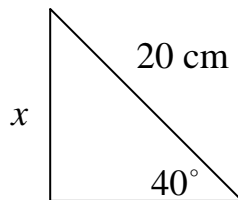Note: The angles and figures may not be drawn to scale.

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21. Find the perimeter and area of the following figure.

7 in

7 in

22. Find the circumference and area of a circle with a diameter of 30 inches to the nearest tenth.
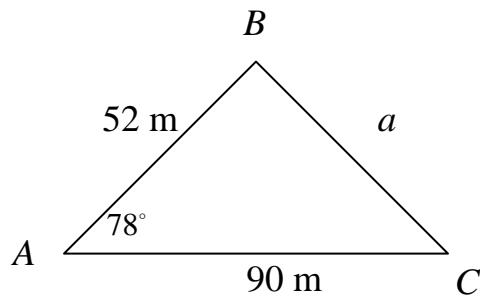
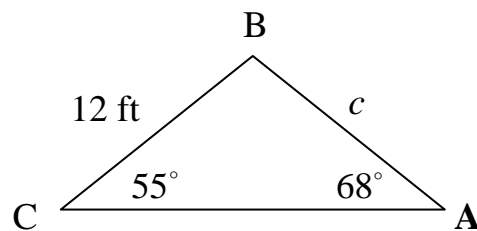23. In the following right triangle, find the length of side x to the nearest tenth.

20 cm

x

40°

Note: The angles and figures may not be drawn to scale.

Fundamentals of Algebra, Geometry, and Trigonometry (Self-Study)

24. Find the area of the given triangle to the nearest tenth.

25. Find c in the given triangle to the nearest tenth.

Note: The angles and figures may not be drawn to scale.

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