

LESSON 3.3 Skills Practice

Name _____ Date _____

Cool As A Cucumber or Hot Like A Tamale!
Literal Equations in Standard Form and Slope-Intercept Form**Vocabulary**

Define the term in your own words.

1. literal equations

3**Problem Set**

Convert between degrees Fahrenheit and degrees Celsius using the literal equation given. If necessary, round the answer to the nearest hundredth.

$$C = \frac{5}{9}(F - 32)$$

1. 72°F

$$C = \frac{5}{9}(F - 32)$$

$$C = \frac{5}{9}(72 - 32)$$

$$C = \frac{5}{9}(40)$$

$$C \approx 22.22$$

$$72^\circ\text{F} \approx 22.22^\circ\text{C}$$

2. -11°F

3. 102.6°F

4. 25°C

5. 42°C

6. -3.4°C

Convert each equation from standard form to slope-intercept form.

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7. $4x + 6y = 48$

8. $3x - 5y = 25$

$$4x + 6y = 48$$

$$4x - 4x + 6y = -4x + 48$$

$$\frac{6y}{6} = \frac{-4x + 48}{6}$$

$$y = -\frac{4}{6}x + 8$$

$$y = -\frac{2}{3}x + 8$$

9. $-4x + 9y = 45$

10. $6x - 2y = -52$

11. $-x - 8y = 96$

12. $12x + 28y = -84$

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Convert each equation from slope-intercept form to standard form.

13. $y = 5x + 8$

$$y = 5x + 8$$

$$-5x + y = 5x - 5x + 8$$

$$-5x + y = 8$$

14. $y = -4x + 2$

15. $y = \frac{2}{3}x - 6$

16. $y = -\frac{1}{2}x - 3$

17. $y = -5x - 13$

18. $y = \frac{3}{4}x + 10$

Solve each equation for the variable indicated.

19. The formula for the area of a triangle is $A = \frac{1}{2}bh$. Solve the equation for h .

$$A = \frac{1}{2}bh$$

$$(2)A = 2\left(\frac{1}{2}bh\right)$$

$$2A = bh$$

$$\frac{2A}{b} = \frac{bh}{b}$$

$$\frac{2A}{b} = h$$

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20. The formula for the area of a trapezoid is $A = \frac{1}{2}(b_1 + b_2)h$. Solve the equation for b_1 .

21. The formula for the area of a circle is $A = \pi r^2$. Solve the equation for r .

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22. The formula for the volume of a cylinder is $V = \pi r^2 h$. Solve the equation for h .

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23. The formula for the volume of a pyramid is $V = \frac{1}{3}lwh$. Solve the equation for w .

24. The formula for the volume of a sphere is $V = \frac{4}{3}\pi r^3$. Solve the equation for r .