Name Key Date Period

CCM8 Unit 5: Solving Equations Study Guide

Solve and check. Show steps.

1) $\sqrt{n} - 12 = -7$

$+12 \quad +12$

$\sqrt{n}^2 = 5^2$

$n = 25$

2) $\frac{3}{4}y - 7 = 5$

$+7 \quad +7$

$\frac{3}{4}y = 12$

$\frac{4}{3} \cdot \frac{3}{4}y = 12 \cdot \frac{4}{3}$

$y = 16$

3) $-3m - 7 = 5$

$+7 \quad +7$

$\frac{-3m}{-3} = \frac{12}{-3}$

$m = -4$

4) $h^3 - 2 = 25$

$+2 \quad +2$

$\sqrt[3]{h^3} = \sqrt[3]{27}$

$h = 3$

5) $7(x+4) - 2x = 10 + (4x - 2)$

$7x + 28 - 2x = 10 + 4x - 2$

$5x + 28 = 8 + 4x$

$-4x \quad -4x$

$1x + 28 = 8$

$-28 \quad -28$

$x = -20$

6) $-8(c - 8) = 3$

$-8c + 64 = 3$

$-64 \quad -64$

$\frac{-8c}{-8} = \frac{-61}{-8}$

$c = \frac{-61}{-8}$

7) $7x - 3 + 2x = 9 - 3x$

$9x - 3 = 9 - 3x$

$+3x \quad +3x$

$12x - 3 = 9$

$+3 \quad +3$

$\frac{12x}{12} = \frac{12}{12}$

$x = 1$

8) $19 + 3x = 3x - 2$

$-3x \quad -3x$

$19 = -2$

Variable is gone!

No Solution

9. Simplify. $4(2e + 7) - 25e$

$8e + 28 - 25e$

$-17e + 28$

10. Simplify. $3(4 + x) + 8x - 4$

$12 + 3x + 8x - 4$

$8 + 11x$

Write as an expression or algebraic equation.

11) 4 times the difference of m and 5

$4(m - 5)$

12) the number of birds increased by 7

$b + 7$

Solve for y.

13) $2x - 3y = 6$

$-2x \quad -2x$

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

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

14) $2y - 4x = 7$

$+4x \quad +4x$

$\frac{2y}{2} = \frac{7 + 4x}{2}$

$y = \frac{7}{2} + 2x$

15) $-5x + 10y = 20$

$+5x \quad +5x$

$\frac{10y}{10} = \frac{20 + 5x}{10}$

$y = 2 + \frac{1}{2}x$

1. $n = 25$
2. $y = 16$
3. $m = -4$
4. $h = 3$
5. $x = -20$
6. $c = \frac{-61}{-8}$
7.
8. No Solution
9. $-17e + 28$
10. $8 + 11x$