Bell Work: Using words, describe each equation.

1) $7x + 10 = 32$

2) $\frac{4}{3}x - 3 = 12$

Solving Equations

Solve each equation.

1. $5x + 4 = 2x + 10$

$-2x \quad -2x$

$3x + 4 = 10$

$-4 \quad -4$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

3. $4(d - 3) = 2d$

$4d - 12 = 2d$

$-4d \quad -4d$

$\frac{-12}{-2} = \frac{-2d}{-2}$

$6 = d$

Solve each equation. Check your answer.

5. $(x-3)-2=6-2(x+1)$

$x-3-2=6-2x-2$

$x-5=4-2x$

$+2x \quad +2x$

$3x-5=4$

$+5 \quad +5$

$\frac{3x}{3}=\frac{9}{3}$

$x=3$

7. $2(2c+1)-c=-13$

$4c+2-c=-13$

$3c+2=-13$

$-2 \quad -2$

$\frac{3c}{3}=\frac{-15}{3}$

$c=-5$

Write an equation to solve each problem.

9. Lisa and Beth have babysitting jobs. Lisa earns $30 per week and Beth earns $25 per week. How many weeks will it take for them to earn a total of $275?

x = weeks

$30x + 25x = 275$

$\frac{55x}{55} = \frac{275}{55}$

$x = 5$ weeks

11. What two consecutive numbers have a sum of 53?

1st # = x = 26

2nd # = x + 1 = 27

1st # + 2nd # = 53

$x + x + 1 = 53$

$2x + 1 = 53$

$-1 \quad -1$

$\frac{2x}{2} = \frac{52}{2}$ $x = 26$

Solve each formula for the indicated variable.

13. $A = \frac{1}{2}h(b_1 + b_2)$, for h

$(2)A = \frac{1}{2}h(b_1 + b_2)(2)$

$\frac{2A}{b_1 + b_2} = \frac{h(b_1 + b_2)}{b_1 + b_2}$

$\frac{2A}{b_1 + b_2} = h$

Solve each equation for y.

15. $\frac{3}{7}(y+2) = g$

$\left(\frac{3}{7}y + \frac{6}{7} = g\right) 7$

$3y + 6 = 7g$

$-6 \quad -6$

$\frac{3y}{3} = \frac{7g}{3} - \frac{6}{3}$ $\quad y = \frac{7g}{3} - 2$

17. $\frac{3y-1}{2} = z$ $\cdot 2$

$3y - 1 = 2z$

$+1 \quad +1$

$\frac{3y}{3} = \frac{2z}{3} + \frac{1}{3}$

$y = \frac{2z}{3} + \frac{1}{3}$