Bell Ringer - Solve each equation.

1) $20 - \dfrac{3}{5}d = 29$

2) $9y - 11 - 5y = 25$

Bell Ringer - Solve each equation.

1) $20 - \dfrac{3}{5}d = 29$

$-20 \qquad\qquad -20$

$\dfrac{-5}{3} \cdot -\dfrac{3}{5}d = \dfrac{9}{1} \cdot \dfrac{-5}{3}$

$d = -15$

2) $9y - 11 - 5y = 25$

$4y - 11 = 25$

$+11 \qquad +11$

$\dfrac{4y}{4} = \dfrac{36}{4}$

$y = 9$

Writing Equations

Steps:

1) Read the story problem.
2) Define the variable.
3) Determine the operations from the key words.
4) Determine the total amount; key word "is"
5) Write the equation combining the variable(s), operations, and total amount into one statement.

- watch the order for subtraction
4 less a number means 4 - n
a number less 4 means n - 4

Place the indicator words under the correct operation in the table.

~~twice~~   ~~product~~   ~~more than~~   ~~decreased by~~

~~quotient~~   ~~increased by~~   ~~total~~   ~~sum~~

█████   ~~times~~   ~~difference~~   ~~less than~~

~~into~~

Addition	Subtraction	Multiplication	Division
Sum	diffence	twice	quotient
total	decreased by	product	into
Increase by	LESS	times	
more than	less than		

Translate into an equation; then solve.

1) Five more than half a number is negative 25.

$x = $ a number

$$\frac{1}{2}x + 5 = -25$$
$$\phantom{\frac{1}{2}x} - 5 -5$$

$$\frac{2}{1} \cdot \frac{1}{2}x = -\frac{30}{1} \cdot \frac{2}{1}$$

$$x = -60$$

Translate into an equation; then solve.

2) Four times a number less 8 equals 28.

$$x = a \text{ number}$$

$$4x - 8 = 28$$
$$ +8 +8$$

$$\frac{4x}{4} = \frac{36}{4}$$

$$x = 9$$

3) Ms. Jones earns $200 each week plus $25 for each pair of Ugg boots she sells. How many pairs of boots does she need to sell to earn $1000 per week?

$$b = \text{pairs of boots}$$

$$25b + 200 = 1000$$
$$ - 200 - 200$$

$$\frac{25b}{25} = \frac{800}{25}$$

$$b = 32 \text{ pairs of boots}$$

4) Lindsay's dad was 24 years old when she was born. This year, the sum of their ages is 50. How old are Lindsay and her dad this year?

$a = $ Lindsay's age

$a + a + 24 = 50$

$2a + 24 = 50$

$2a = 26$

$a = 13$

L	D	T
6	30	36
10	34	44

Lindsay is 13 years old and her dad is 37 years old.

5) Six families split the cost of renting an ice skating rink for their six sons. Each son also pays $3 to rent skates. If each family spent $33, what was the cost of renting the ice skating rink?

$C = $ cost to rent the rink

$$\frac{C}{6} + 3 = 33$$
$$\quad\quad -3 \quad\quad -3$$

$$6 \cdot \frac{C}{6} = 30 \cdot 6$$

$$C = \$180 \text{ rent}$$