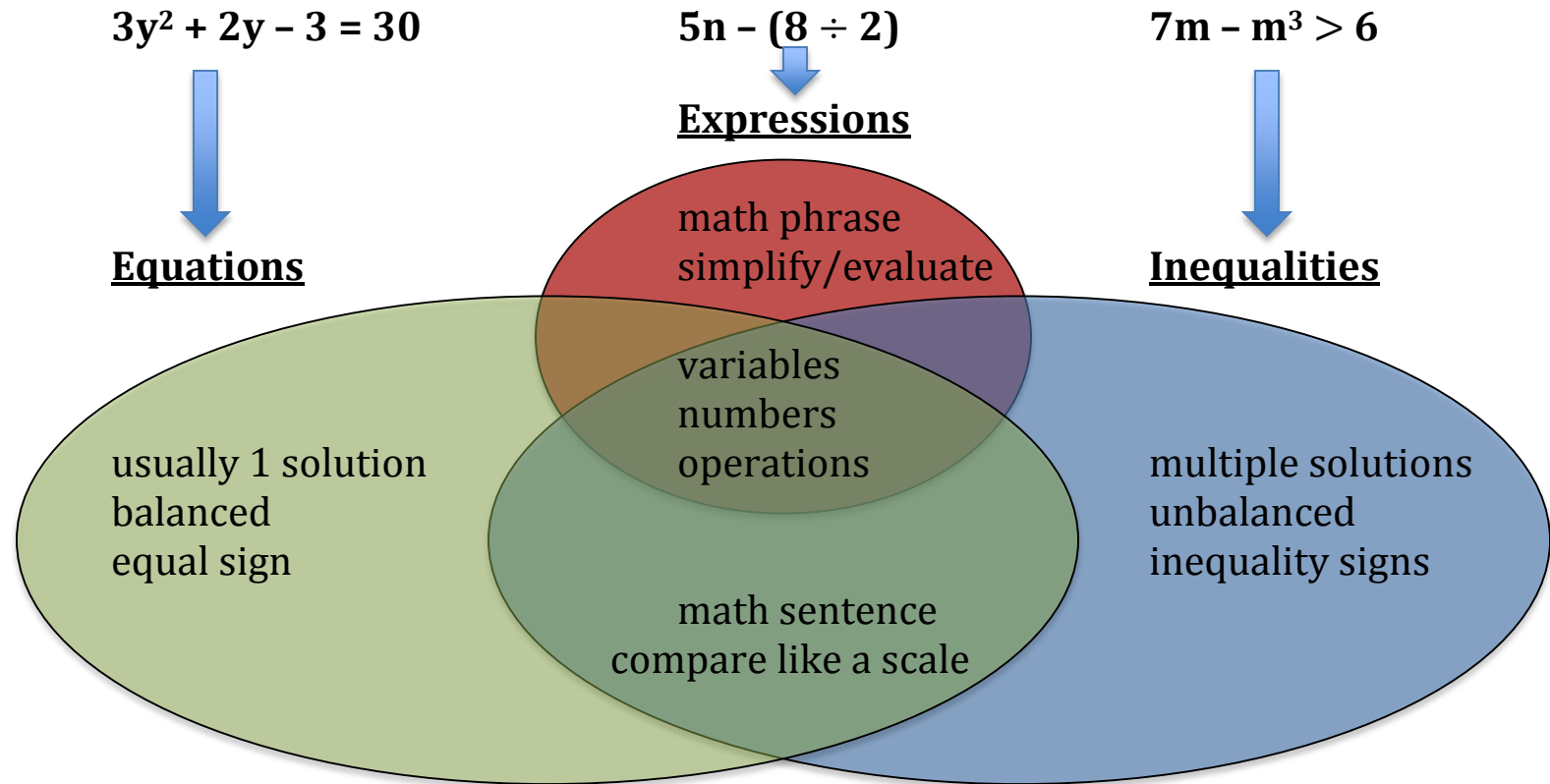


**Expressions, Equations and Inequalities Guided Notes with Answers**

**List characteristics of each “item” above and then create a Venn diagram to compare and contrast similarities and differences.**

**I. Categorize each of the following mathematical “items” into the proper columns:**

|                |               |                      |                 |                       |                      |
|----------------|---------------|----------------------|-----------------|-----------------------|----------------------|
| $5x + 3x + 2x$ | $45$          | $45x - 4 = 86$       | $4 + 9y > 36$   | $5 - 3 + 12 \times 2$ | $9 < 23b$            |
| $t - 7 = 7$    | $2w + 3 = 23$ | $98 \div 2x \leq 14$ | $u - 5 \geq 12$ | $5d - d + b$          | $7g = \frac{10}{2g}$ |

| Expressions           | Equations            | Inequalities         |
|-----------------------|----------------------|----------------------|
| $5x + 3x + 2x$        | $45x - 4 = 86$       | $4 + 9y > 36$        |
| $45$                  | $t - 7 = 7$          | $9 < 23b$            |
| $5 - 3 + 12 \times 2$ | $2w + 3 = 23$        | $98 \div 2x \leq 14$ |
| $5d - d + b$          | $7g = \frac{10}{2g}$ | $u - 5 \geq 12$      |

**II. Write each “statement” mathematically and identify it as an expression, equation, or inequality:**

1. Each fountainhead had two nozzles each and there were 5 faucets.

$2f + 5$ , expression.

2. All three of the fountainheads sprayed out the same amount of water, which totaled twelve thousand gallons of water.

$3f = 12,000$ , equation.

3. The two filters processed at least five-hundred-thousand gallons of water a week.

$2f \geq 500,000$ , inequality.