

3.1 Simplifying Algebraic/Variable Expressions by Combining Like Terms (CLT) p.82

Expressions can't be solved because they don't have an equal sign. They can only be simplified.

An algebraic expression is in simplest form when it has no like terms and no parenthesis.

Steps:

- ✓ Identify like terms by circling them or boxing them or underlining them
- ✓ Combine like terms (CLT) w/ variables first by adding or subtracting the coefficients; highest exponents first; alphabetical order
- ✓ Combine constants last

$$\textcircled{1} \quad \underbrace{2y}_{\text{y}} - 3 + \underbrace{5y}_{\text{yyyyy}}$$

$$\boxed{7y - 3}$$

$$\textcircled{3} \quad \underline{2} + \underline{3x} - \underline{4} - \underline{x} + \underline{2}$$

$$2x + 0 = \boxed{2x}$$

$$\textcircled{2} \quad c - 1 + 2c + 5$$

$$\boxed{3c + 4}$$

$$\textcircled{4} \quad 8m - 7 - 2m - 5 + n$$

$$\boxed{6m + n - 12}$$

$$\textcircled{5} \quad \underline{3x} + \underline{2} + \underline{y} + \underline{x} - \underline{5}$$

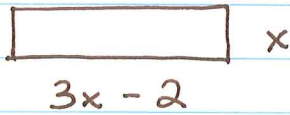
$$\boxed{4x + y - 3}$$

$$\textcircled{6} \quad \cancel{4x} - 2 + 6y - \cancel{x} + 5 - 3y$$

$$\boxed{3x + 3y + 3}$$

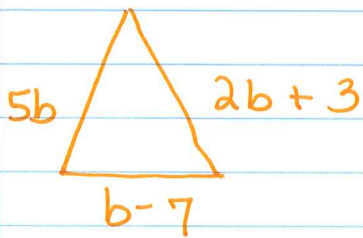
Find the perimeter: add all the sides

1)



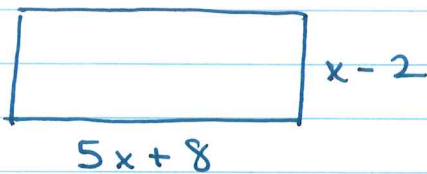
$$\begin{array}{r} 3x - 2 \\ 3x - 2 \\ 1x \\ 1x \\ \hline 8x - 4 \end{array}$$

2)



$$\begin{array}{r} 2b + 3 \\ 5b \\ 1b - 7 \\ \hline 8b - 4 \end{array}$$

3)



$$\begin{array}{r} 5x + 8 > 16 \\ 5x + 8 \\ 1x - 2 > -4 \\ 1x - 2 \\ \hline 12x + 12 \end{array}$$