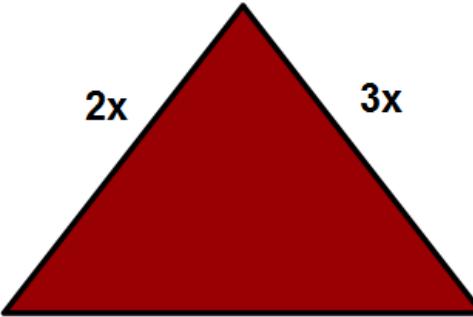


## 5-7 and 5-8 Addition and Subtraction of Polynomials

Express the perimeter of the triangle as a polynomial:

$$\begin{array}{r} \cancel{2x} + \cancel{3x} + \cancel{x} + 6 \\ \hline 6x + 6 \end{array}$$


$x + 6$

To subtract:

- 1.) Remove parentheses from 1st quantity
- 2.) Change all the signs of 2nd quantity and remove parentheses
- 3.) Combine like terms

Add.

$$(5x^2 + 3x + 4) + (3x^2 + 5)$$

$$\begin{array}{r} \underline{5x^2 + 3x + 4} \\ + \underline{3x^2} + 5 \\ \hline 8x^2 + 3x + 9 \end{array}$$

$$(7a^2b^3 + ab) + (1 - 2a^2b^3)$$

$$\begin{array}{r} \underline{7a^2b^3} + \underline{ab} + \underline{1 - 2a^2b^3} \\ \hline 5a^2b^3 + ab + 1 \end{array}$$

To subtract:

- 1.) Remove parentheses from 1st quantity
- 2.) Change all the signs of 2nd quantity and remove parentheses
- 3.) Combine like terms

**Subtract:**

$$(5x^2 + 3x - 2) - (2x^2 + 1)$$

$$\begin{array}{r} 5x^2 + 3x \boxed{-2} \\ - 2x^2 \cancel{-1} \\ \hline 3x^2 + 3x - 3 \end{array}$$

$$(2a^2b^2 + 3ab^3 - 4b^4) + (a^2b^2 \cancel{-} 5ab^3 \cancel{+} 3b \cancel{+} 2b^4)$$

$$\begin{array}{r} 2a^2b^2 + 3ab^3 - 4b^4 - a^2b^2 + 5ab^3 - 3b + 2b^4 \\ \hline a^2b^2 + 8ab^3 - 2b^4 - 3b \end{array}$$