

**Polynomial Addition and Subtraction - Guided Lesson Explanation****Explanation#1**

Like terms are terms that have the same variables raised to the same powers.

We have to add like terms and their coefficients.

$x^2$  is the same as  $1x^2$

$$(6x^2 + 5x + 8) - (x^2 + 4)$$

$$(6x^2 + 5x + 8) + (-x^2 - 4) \text{ rewrite as addition}$$

$$(6x^2 - x^2) + 5x + (8 - 4)$$

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

We cannot combine  $5x^2$  and  $5x$  because they are not like terms. They both contain  $x$ s, but the  $x$ s are raised to different powers. This makes them different terms.

**Explanation#2**

We have to add like terms and their coefficients.

$$7a^2 + (3a + 4) - (2a + 6)$$

$$7a^2 + (3a + 4) + (-2a - 6)$$

$$7a^2 + (3a - 2a) + (4 - 6)$$

$$7a^2 + a - 2$$

We cannot combine what is left because they are not like terms.



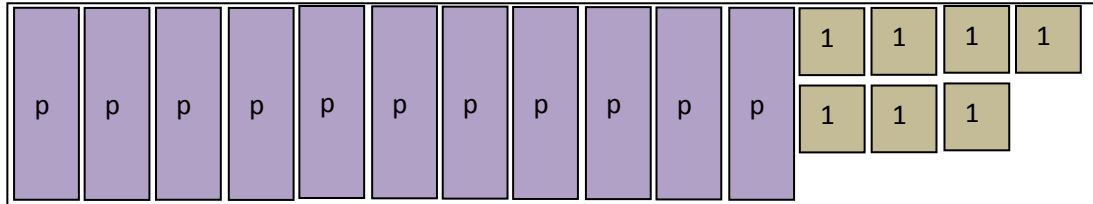
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### Explanation#3

These algebra boxes represent the addition problem

$$(5p + 3) + (6p + 4)$$



We have use the algebra boxes tiles to solve the addition problems.

In total, the box sets have 11  and 7  boxes

The result is  $11p + 7$ .

