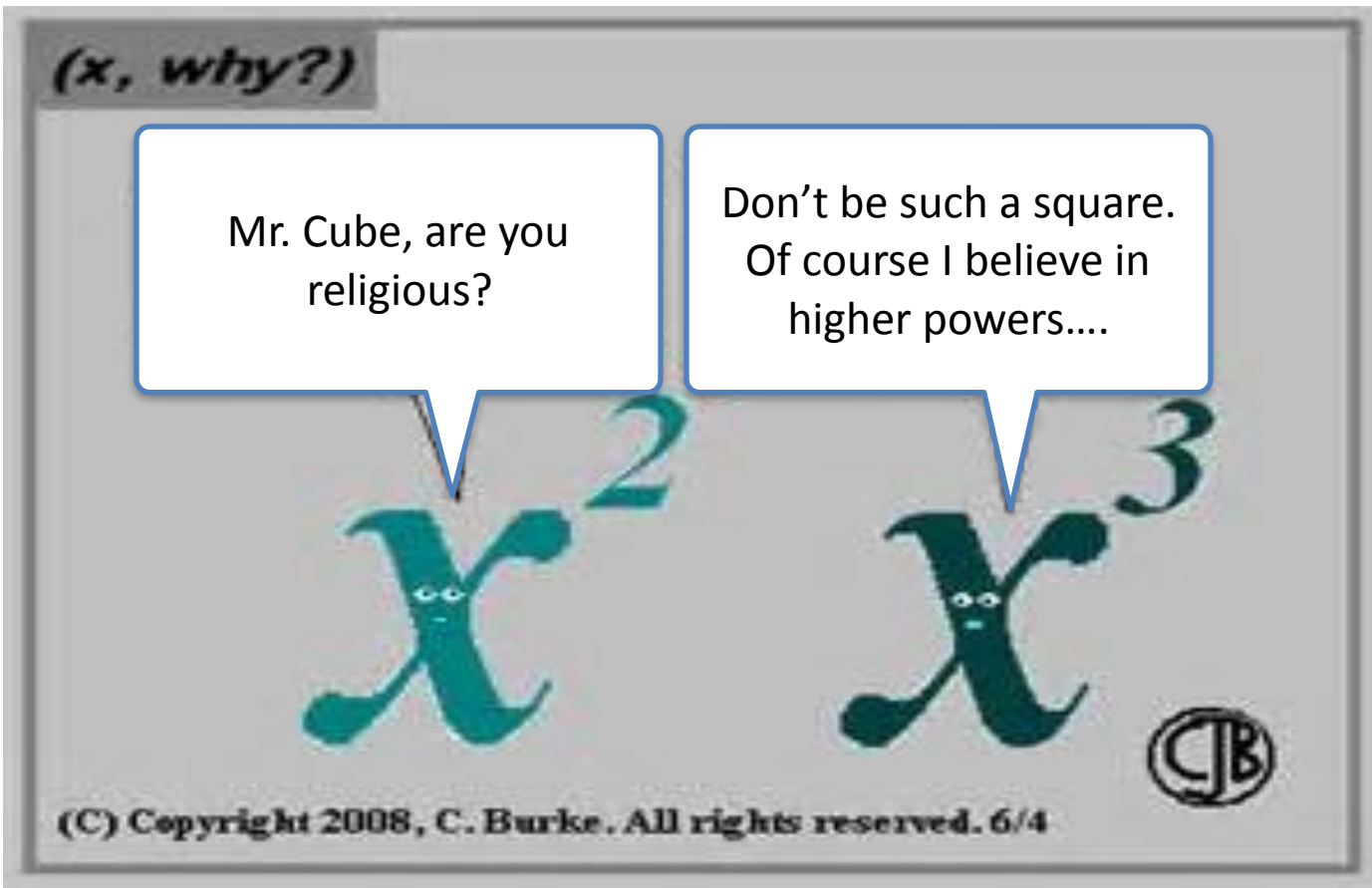


Lesson 1.2.1 – Adding and Subtracting Polynomials



By the end of this lesson, I will be able to answer the following questions...

1. How can a variable and its power be used to determine which terms are like terms?
2. How do I add and subtract polynomials?
3. How can I apply polynomial operations to problems involving geometry (perimeter)?

Vocabulary

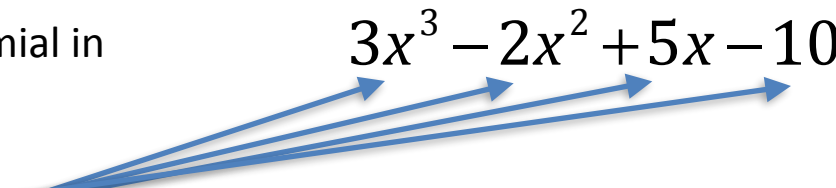
- Monomial: an expression with one term consisting of a number, a variable or a product of which.

$$3, x, 2x^2, xy \dots$$

- Polynomial: a monomial or sum of monomials that contains variables, numeric quantities or both.

$$3x + 5, 5x^5 - 4x + 3, 3x - 4y \dots$$

- Standard Form: Arranging a polynomial in order of greatest to least powers.

$$3x^3 - 2x^2 + 5x - 10$$


- Term: Each “part” of a polynomial.

- Like Terms: Terms that contain the same variable(s) raised to the same power.

$$2x \text{ and } 5x, 3x^2 \text{ and } 25x^2, 10xy \text{ and } 7xy \dots$$

- Distributive Property:

$$a(x + c) \rightarrow ax + ac$$

so.....

$$3(2x - 5) \rightarrow 6x - 15$$

Prerequisite Skills with Practice

Evaluate the following.

$$-7 + 5 + (-2) =$$

$$-5 - 5 - (-4) =$$

Use the distributive property to rewrite in **standard form**.

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

$$-2(9x - 2x^2 + 3)$$

Example one

Find the sum of:

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

Example two

Find the sum of:

$$(7x^2 - x + 15) + (6x + 12)$$

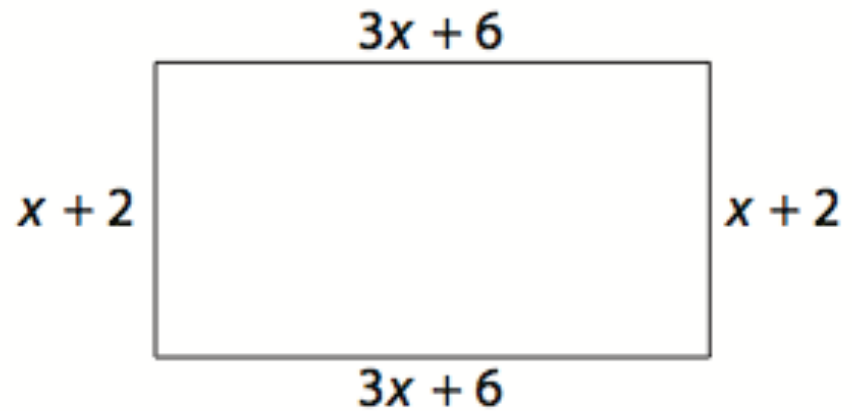
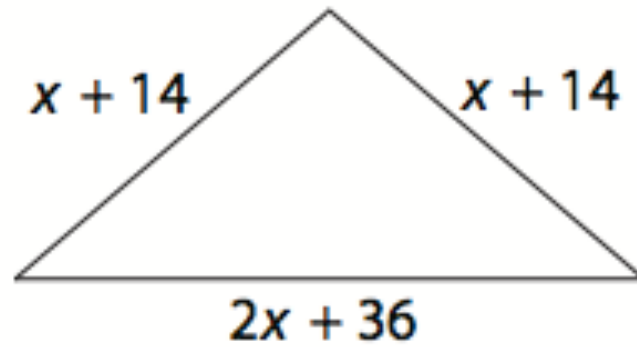
Example three

Find the difference of:

$$(x^5 + 8) - (3x^5 + 5x)$$

Example four

Find the perimeter of the figures to the right.



THE END



Visit [PlottsMath](#) for assignment details