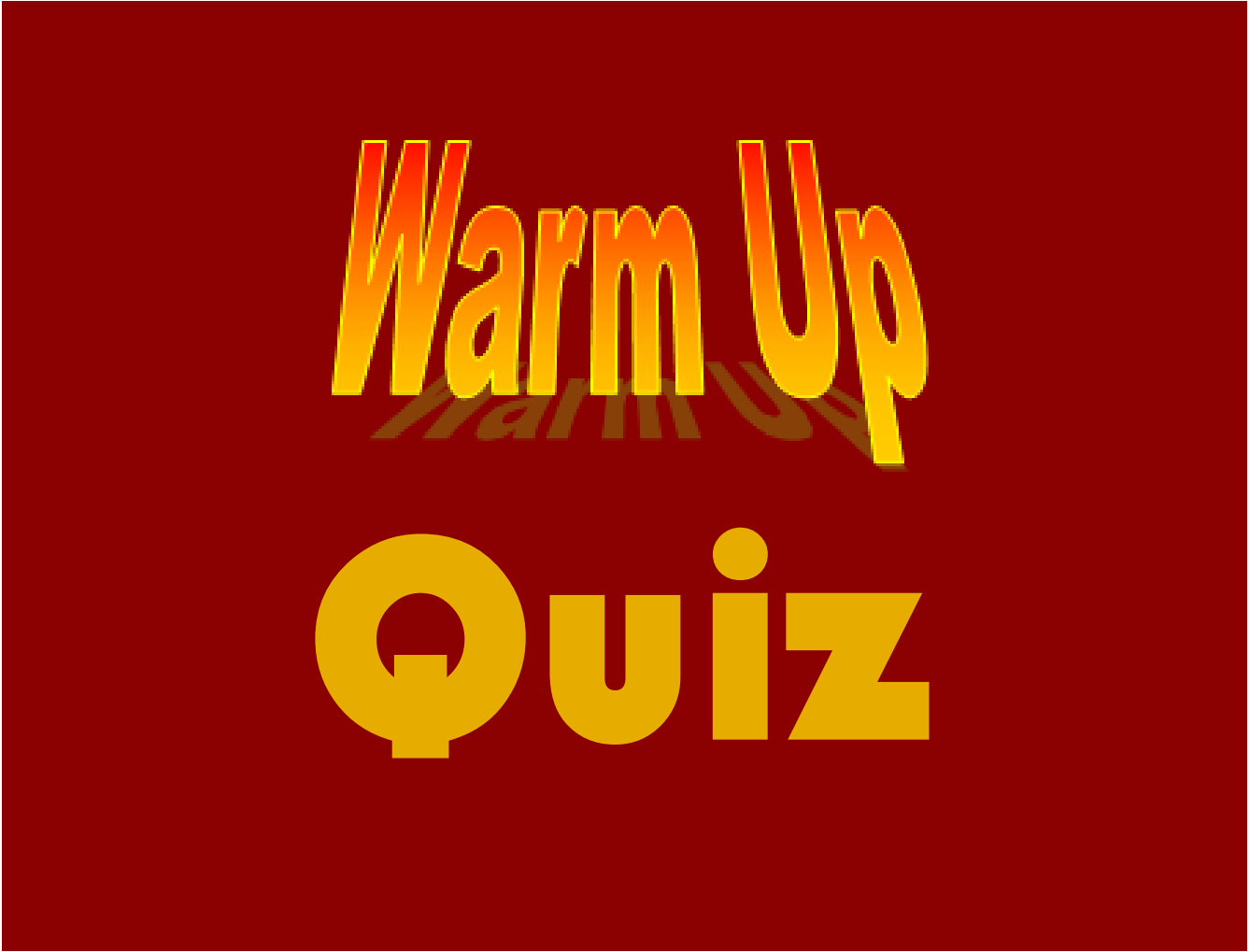


Curriculum Outcome

- (PR 5) Demonstrate an understanding of polynomials (limited to of degree less than or equal to 2).
- (PR 6) Model, record and explain the operations of addition and subtraction of polynomial expressions, concretely, pictorially and symbolically (limited to polynomials of degree less than or equal to 2).
- (PR 7) Model, record and explain the operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials, concretely, pictorially and symbolically.

Student Friendly:

"Subtracting Polynomials "

A large red rectangular graphic containing the text "Warm Up Quiz". The words "Warm Up" are in a stylized, italicized font with a yellow-to-orange gradient and a drop shadow. The word "Quiz" is in a bold, yellow, sans-serif font.

Warm Up
Quiz



Things you already know...

$$18 - 5 = 13$$



$$15x - 31x = -16x$$

$$12 + (-5) = 17$$

$$-16 + (-11) = -5$$



$$(5x - 11) \ominus (3x - 6)$$

Method: 1

Carry Through

$$\boxed{5x} - 11 - \boxed{3x} + 6$$

$$5x - 3x \quad -11 + 6$$

$$2x - 5$$

$$(5x - 11) \ominus (3x - 6)$$

Method: 2

Add the Opposite!

$$(5x - 11) + (-3x + 6)$$

$$5x - 3x \quad -11 + 6$$

$$2x - 5$$

The diagram illustrates the subtraction of polynomials using algebra tiles. It is divided into three horizontal sections:

- Top Section:** A yellow square labeled x^2 is shown on the left. A minus sign is circled in yellow, with an arrow pointing to a red square labeled $-x^2$ on the right. Below this, two yellow squares with diagonal lines are shown, separated by a plus sign. An arrow points from the circled minus sign to the second square.
- Middle Section:** A yellow vertical bar is followed by a minus sign, followed by a red vertical bar.
- Bottom Section:** A yellow square is followed by a minus sign, followed by a red square.


You Try

$(20x^2 + 12x - 7) - (13x^2 - 2)$

$20x^2 + 12x - 7 - 13x^2 + 2$

$20x^2 - 13x^2 + 12x - 7 + 2$

$7x^2 + 12x - 5$



Try This!

$$(6x^2 - 4x + 2) - (-8x^2 - 9x + 2)$$

$$6x^2 - 4x + 2 + 8x^2 + 9x - 2$$

$$6x^2 + 8x^2 - 4x + 9x + 2 - 2$$

$$14x^2 + 5x$$

Example 3.

The height of a ball kicked on Earth can be modelled by: $18 + 35t - 4.9t^2$

On Mars the height is modelled by: $52 + 26t - 1.3t^2$

Find a formula for the difference in the height of the ball on Mars as compared to Earth.

$$\begin{array}{r} \text{Mars - Earth} \\ (52 + 26t - 1.3t^2) - (18 + 35t - 4.9t^2) \end{array}$$

$$52 + 26t - 1.3t^2 = 18 - 35t + 4.9t^2$$

$$4.9t^2 - 1.3t^2 + 26t - 35t - 18 + 52$$

$$3.6t^2 - 9t + 34$$

$$t = 10$$

$$3.6t^2 - 9t + 34$$

$$3.6(10)^2 - 9(10) + 34$$

Class/Homework

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(No algebra tiles just combine like terms and subtract)

#7ac

#8 aceh

#10

