ADDING AND SUBTRACTING POLYNOMIALS

LESSON NOTES

BIG IDEAS:

- Sums and differences of monomials are called **polynomials**
- **Monomials** themselves are also **polynomials**
- Polynomials can be added and subtracted by **collecting like terms**
- A polynomial can be **subtracted** by **adding the opposites** of its terms

EXAMPLE 1

$3x+(2x-8)$

$=3x+2x-8$

$=5x-8$

EXAMPLE 2

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

$=3x-5-x+1$

$=3x-x-5+1$

$=2x-4$

EXAMPLE 3

$7x-(4x-1)$

$=7x-4x+1$

$=3x+1$

EXAMPLE 4

$(8x-7)-(-2x+5)$

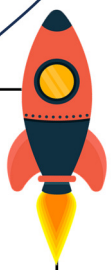
$=8x-7+2x-5$

$=8x+2x-7-5$

$=10x-12$

MORE EXAMPLES

Things to remember...



THINKING BEYOND...

1. Simplify the expression $(2x^2+5x-8)+2(4x^2-3x+7)$.
2. Simplify the expression $(7x-4)-3(9x+5)$.
3. Simplify the expression $2(6x^2+5)-4(x-2)$.
4. The perimeter of a rectangle is represented by the expression $18x-12$. If the length of the rectangle is twice the width of the rectangle, determine expressions for the rectangle's length and width.