

## 4.3 Add and Subtract Polynomials

### Need To Know



- Adding polynomials
- Opposites of a polynomial
- Subtracting polynomials
- Polynomials problems solving

## Adding Polynomials

Add:  $(x^2 + 4x - 9) + (7x - 3)$

$$\left(\frac{1}{3}x^9 + 3.4x^5 - 3x^2 + 7\right) + \left(-\frac{3}{4}x^9 - 0.27x^5 + 2x - 5\right)$$



## Adding Polynomials - Columns

$$\text{Add: } (2x^4 + 3x^3 + 4x) + (5x^3 - 6x - 3)$$



## The Opposite of a Polynomial

Write the opposite of  $(2x^2 + 3x - 4)$  in two ways

Simplify:

$$-(5x^2 - 6x + 3)$$

$$-\left(-\frac{3}{4}x^9 - 0.27x^5 + 2x - 5\right)$$



## Subtracting Polynomials

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Subtract:

$$(2x^2 + 3x + 4) - (5x^2 - 6x + 3)$$

Subtract:

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

$$\underline{4x^2 - 4x - 5}$$



## Practice – time permitting

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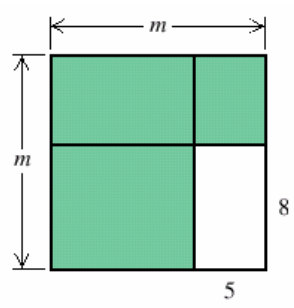
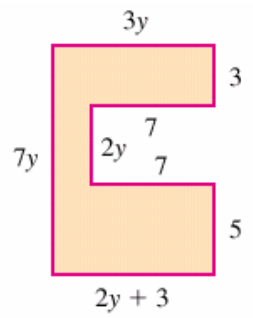
Simplify:

$$(2y^2 - 7y - 8) - (6y^2 + 6y - 8) + (4y^2 - 2y + 3)$$

# Polynomial Problem Solving

Find the perimeter

Find shaded area



# Polynomial Problem Solving

Find  $(y-2)^2$ , i.e. find the shaded area.

