



3-2 Reteach to Build Understanding

Adding, Subtracting and Multiplying Polynomials

1. Add, subtract or multiply each of the following polynomials.

a. Add $(4x^2 - 6x + 9) + (3x^2 + 8x - 10)$

Step 1	Write the polynomials.	$(4x^2 - 6x + 9) + (3x^2 + 8x - 10)$
Step 2	Rearrange so like terms are together.	$(4x^2 + \quad) + (-6x + \quad) + (-10 + \quad)$
Step 3	Add the like terms together to get the answer.	

b. Multiply $(x + 2)(3x^2 + 2x - 4)$

Step 1	Write the polynomials.	$(x + 2)(3x^2 + 2x - 4)$
Step 2	Multiply the 2nd equation by x and then multiply the same equation by $+2$.	$(x) \quad \quad \quad + 2$
Step 3	Multiply each equation.	$(3 \quad + 2x^2 \quad) + (6x^2 \quad - 8)$
Step 4	Rearrange the like terms.	$3x^3 + (2x^2 \quad) + (-4x + 4x)$
Step 5	Simplify to get the answer.	

2. Adam solved this problem. His teacher said it was incorrect.

Find his error and correct it. $(a - 3)(5a^3 - a^2 + 2a - 7)$

$$= (a)(5a^3 - a^2 + 2a - 7) - (3)(5a^3 - a^2 + 2a - 7)$$

$$= 5a^4 - a^3 + 2a^2 - 7a - 15a^3 + 3a^2 + 6a - 21$$

$$= 5a^4 - 16a^3 + 5a^2 - a - 21$$

3. Solve.

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

$$= (2x^2 + 3x^2) + (\quad) + (3 - 2)$$

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b. $(4x^3 - 2x - 2) - (6x^3 + 3x - 8)$

$$= 4x^3 - 2x - 2 - 6x^3 - 3x + 8$$

$$= (4x^3 - 6x^3) + (\quad) + (\quad)$$

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c. $(x + 4)(2x^2 - 4x - 8)$

$$= (x)(2x^2 - 4x - 8) + 4(2x^2 - 4x - 8)$$

$$= 2x^3 - 4x^2 - 8x + 8x^2 - 16x - 32$$

$$= 2x^3 + (-4x^2 + 8x^2) +$$

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