

Agenda

Homework:

- AM
- Multiplying Monomial with Polynomial WS

Materials:

- Notebook
- Calculator (if needed)

DO NOW:

- Take out homework
- In your NOTEBOOK, SOLVE:
 - $(2x^2 + 5x - 7) - (3 - 4x^2 + 6x)$
 - Set up TOOLBOX notes:
 - Topic: Multiplying a Polynomial by a Monomial

$$(2x^2 + 5x - 7) - (3 - 4x^2 + 6x)$$



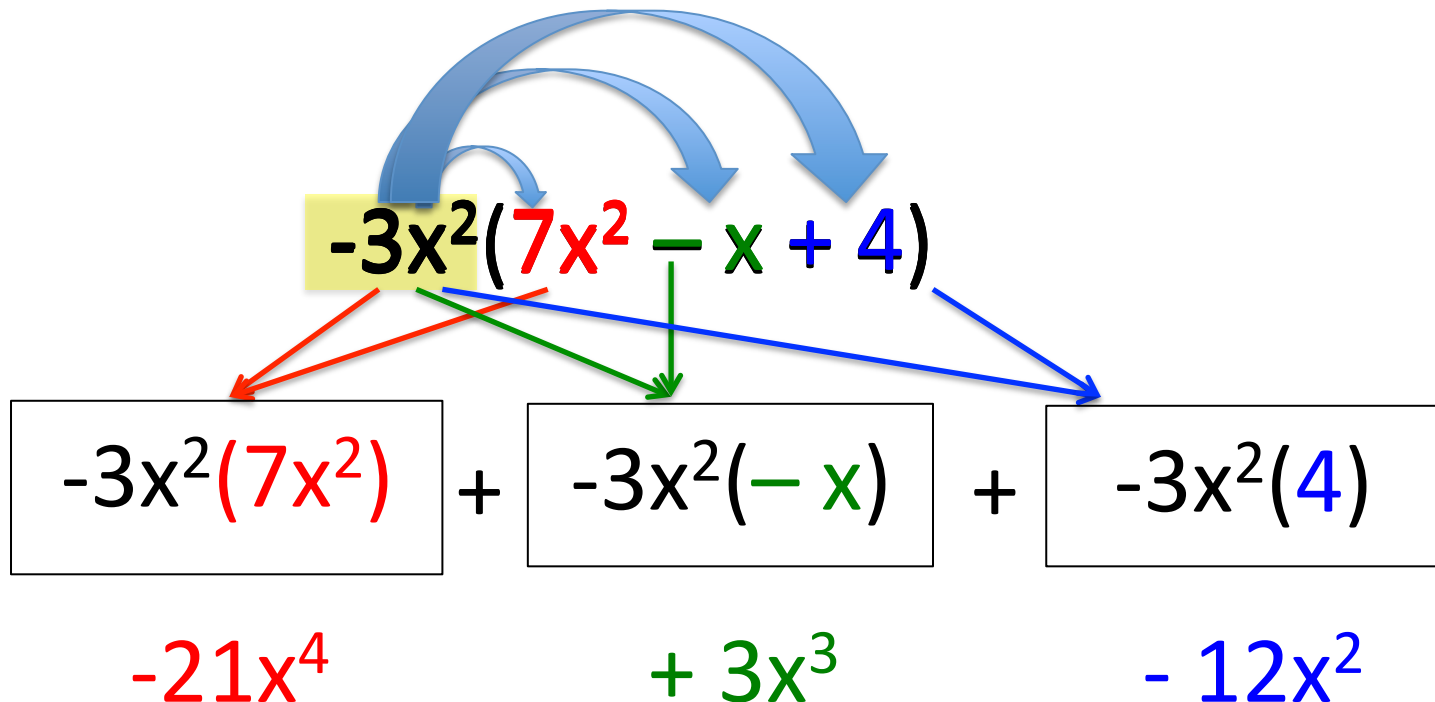
Toolbox

- To multiply a polynomial by a monomial:
 - Use the Distributive Property:
 - Each TERM of the polynomial is multiplied by the monomial using your **exponent rules when multiplying terms with the same base**
 - SIMPLIFY by combining like terms (recall steps for adding and subtracting polynomials)

***When multiplying numbers with the same base:
(1) KEEP the base and (2) ADD the exponents**

Find the product of $-3x^2(7x^2 - x + 4)$ 

Distribute the monomial

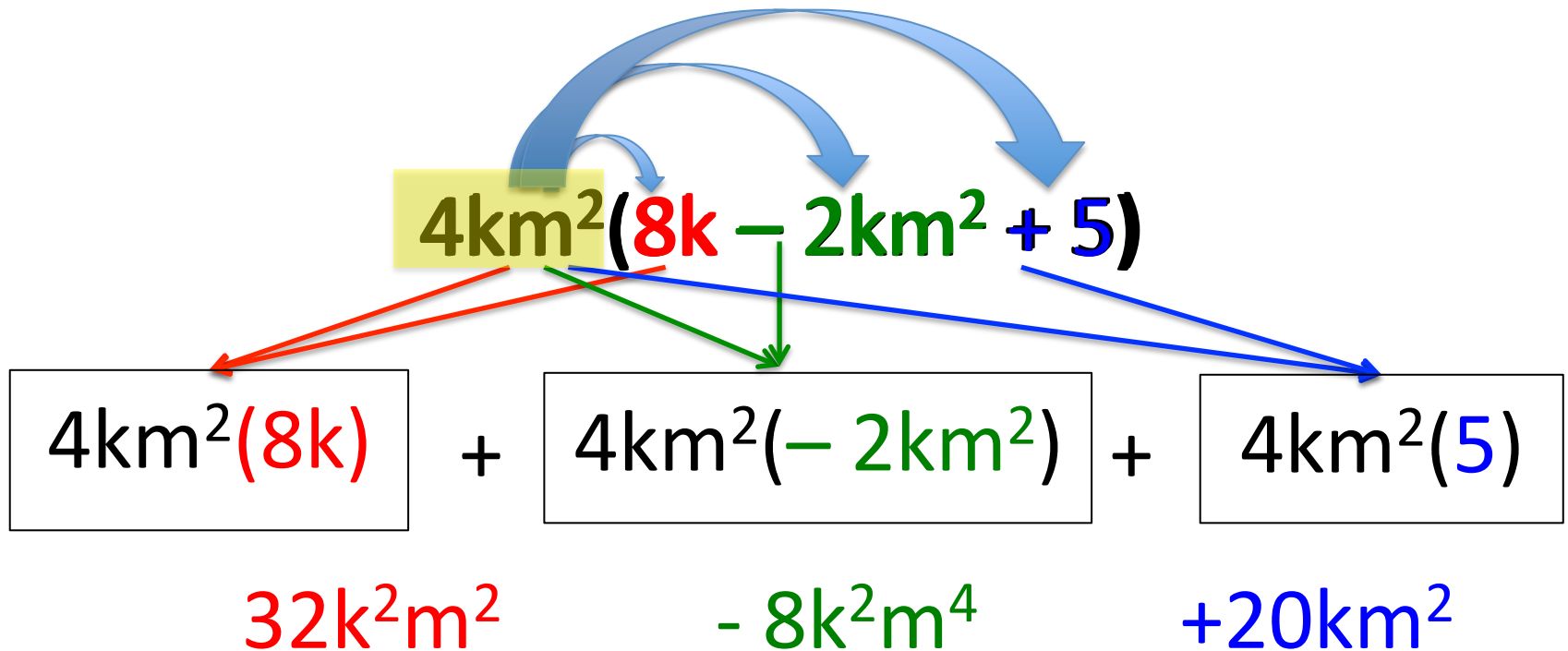

$$\begin{array}{c} -3x^2(7x^2 - x + 4) \\ \downarrow \quad \downarrow \quad \downarrow \\ \boxed{-3x^2(7x^2)} + \boxed{-3x^2(-x)} + \boxed{-3x^2(4)} \\ -21x^4 \quad + 3x^3 \quad - 12x^2 \end{array}$$

(1) MULTIPLY the Coefficients (2) Keep the base (3) Add the Exponents



Find the product of
 $4\text{km}^2 (8\text{k} - 2\text{km}^2 + 5)$

Distribute the monomial



(1) MULTIPLY the Coefficients (2) Keep the base (3) Add the Exponents



Simplify the expression

$$2p(-4p^2 + 5p) - 5(2p^2 + 20)$$

- Distribute FIRST, then combine like terms

$$2p(-4p^2 + 5p) - 5(2p^2 + 20)$$
$$2p(-4p^2) + 2p(5p) + -5(2p^2) + -5(20)$$
$$-8p^3 + 10p^2 - 10p^2 - 100$$
$$-8p^3 - 100$$

Classwork

- Textbook pg. 474-475
#2-10 (E), #18-22 (E)
AND #36

Mini Quiz

$$x(4x^2 + 15x + 4) - 4(3x - 1)$$