

## 9-6 Multiplying a Polynomial by a Monomial (DAY ONE)

Algebra One

712

Simplify. You must show one work step.

1)  $5(x + 6)$

$5(x) + 5(6)$

(MSS)

$5x + 30$

Simplify. You must show one work step.

$$\begin{aligned} 2) \quad & 7xy(4x^2 - 2xy + y^2) \\ & 7xy(4x^2) - 7xy(2xy) + 7xy(y^2) \quad (\text{MSS}) \\ & 7x^3y - 14x^2y^2 + 7xy^3 \end{aligned}$$

Simplify. You must show one work step.

$$\begin{aligned} 3) \quad & -5x^4(6x^3 - 5x^2 + 10) \\ & -5x^4(6x^3) - (-5x^4)(5x^2) + (-5x^4)(10) \quad (\text{MSS}) \\ & -30x^7 + 25x^6 - 50x^4 \end{aligned}$$

Simplify. You must show one work step.

4)  $\frac{3}{4}x^6(8x^2 + 12x + 24)$

$$\frac{3}{4}x^6(8x^2) + \frac{3}{4}x^6(12x) + \frac{3}{4}x^6(24) \quad (\text{MSS})$$

$$6x^8 + 9x^7 + 18x^6$$

Simplify. You must show two work steps.

5)  $3x(x + 2y) + 7y(x + 2y)$

$$3x(x) + 3x(2y) + 7y(x) + 7y(2y) \quad (\text{MSS})$$

$$3x^2 + 6xy + 7xy + 14y^2$$

$$3x^2 + 13xy + 14y^2$$

Simplify. You must show two work steps.

$$\begin{aligned} 6) \quad & 6x(x + 7y) - 2y(4x + 5y) \\ & 6x(x + 7y) + -2y(4x + 5y) \\ & 6x(x) + 6x(7y) + -2y(4x) + -2y(5y) \quad (\text{MSS}) \\ & 6x^2 + 42xy - 8xy - 10y^2 \\ & \boxed{6x^2 + 34xy - 14y^2} \end{aligned}$$

## 9-6 CLASSWORK

On a separate sheet of paper, simplify. You must show one work step on #1-3 and two work steps on #4-5

- 1)  $3x(8x - 9)$
- 2)  $6x(5x^3 + 3x^2 - x + 7)$
- 3)  $3xy^4(3x^9 + 7x^4y^2 - y + 4)$
- 4)  $5x(2x + 3y - 4) - 9y(y + 3x)$
- 5)  $2y^2(3xy + 9x^2) + 5x^2(y^3 - 4y^2)$

HW is on the pink sheet!