

~~Jan. 8~~ bell ringer
Multiply.

1. $2x(3xy + 6x - 4y)$ = $6x^2y + 12x^2 - 8xy$

2.

$6x^2y^3(2x - 7y + 3)$

= $12x^3y^3 - 42x^2y^4 + 18x^2y^3$

Section 8-5, page 494

Learning target:

You can factor polynomials by using the GCF and by grouping .

Part 1: factoring by using the GCF

$$1) 15x + 25x^2$$
$$5x(3 + 5x)$$

$$2) 49x^2 - 7x$$
$$7x(7x - 1)$$

3)

$$12xy + 24xy^2 - 30x^2y^4$$

$$6xy(2 + 4y - 5xy^3)$$

4) $10g^2h^2 + 9gh^2 - g^2h$

$$gh(10gh + 9h - g)$$

5)

$$4r(q+2) + 3(q+2)$$

$$(q+2)(4r+3)$$

Part2: factoring by grouping(4 or more even number of terms)

$$1) \quad \underbrace{np+2n} + \underbrace{8p+16}$$

$$n(p+2) + 8(p+2)$$

$$(p+2)(n+8)$$

$$\begin{aligned} 2) \quad & \underline{3ac-2a} + \underline{15c-10} \\ & a(3c-2) + 5(3c-2) \\ & (3c-2)(a+5) \end{aligned}$$

$$\begin{aligned} 3) \quad & \underline{2xy+7x} - \underline{2y-7} \\ & x(2y+7) - 1(2y+7) \\ & (2y+7)(x-1) \end{aligned}$$

$$\text{or } 2xy - 2y + 7x - 7$$

$$24(x-1) + 7(x-1)$$

$$4) \quad \underline{3dt - 21d + 35} - \underline{5t}$$

$$3d(t-7) + 5(7-t)$$

$$3d(t-7) - 5(t-7)$$

$$(t-7)(3d-5)$$

$$5) \underline{21th + 3t + 7h + 1}$$

$$3t(7h+1) + 1(7h+1)$$

$$(7h+1)(3t+1)$$

6)

$$48tu - 90t + 32u - 60$$

$$2(\underline{24tu - 45t} + \underline{16u - 30})$$

$$2[3t(\underline{8u - 15}) + 2(\underline{8u - 15})]$$

$$2(8u-15)(3t+2)$$

Assignment

Q. 497-498

2-8E, 16-38E