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Jan. 7 - bell ringer

1)  $2x(3xy + 6x - 4y)$

$6x^2y + 12x^2 - 8xy$

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

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

25)

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

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

~~$x^2 + x - 3 = 11x + 4 + x^2$~~

~~$-x^2 - 11x + 3 = 4 + x^2$~~

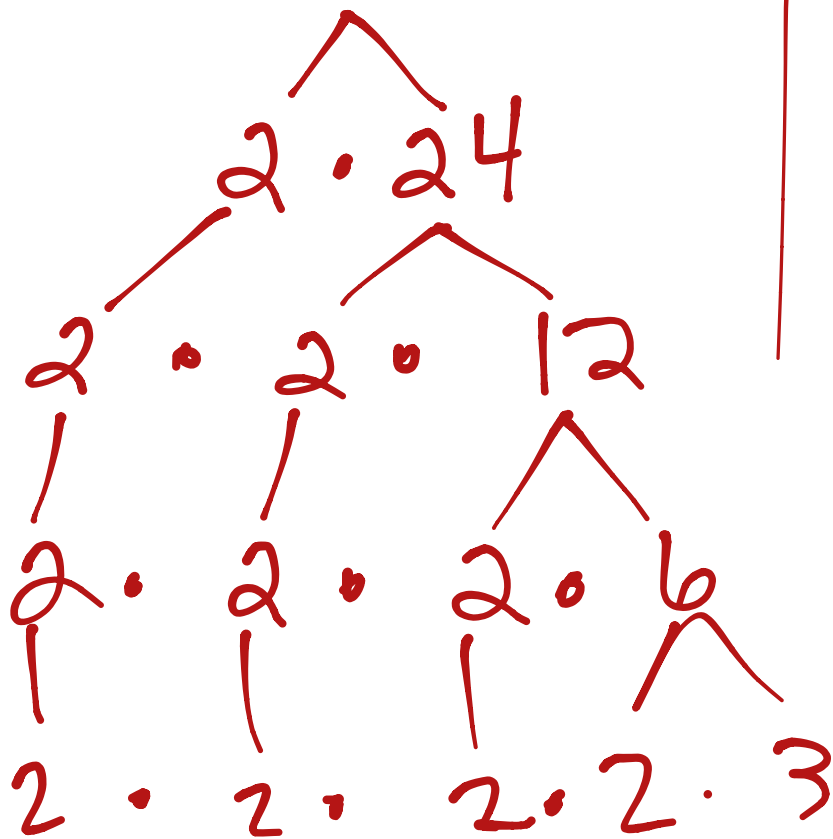
$-10x = 7$

$$\frac{-10}{-10} \quad \frac{-10}{-10} \quad x = -\frac{7}{10}$$

Learning target:

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

Factor: 48



$$2^4 \cdot 3$$

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)

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

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

Part 2: factoring by grouping (the polynomial will have 4 or more even number of terms)

$$\begin{aligned} 1) \quad & \underline{np + 2n} + \underline{8p + 16} \\ & n(p+2) + 8(p+2) \\ & \boxed{(p+2)(n+8)} \end{aligned}$$

$$\begin{aligned} 2) \quad & \underline{3xy - 2x} + \underline{15y - 10} \\ & x(3y-2) + 5(3y-2) \\ & (3y-2)(x+5) \end{aligned}$$

3)

$$2xy + 7x - 2y - 7$$

$$x(2y+7) - 1(2y+7)$$

$$(2y+7)(x-1)$$

4)

$$3dt - 21d + 35 - 5t \checkmark$$

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

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

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

$$\boxed{(t-7)(3t-5)}$$

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

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

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



Factor Completely

Q

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

$$2(24tu - 45t + 16u - 30)$$

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

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

# Assignment

Q. 497-498

(2-8E  
16-38E)



23)

$$\left(u + \frac{5}{6}\right) \left(u + \frac{1}{9}\right)$$

$$\frac{5}{6} \cdot \frac{1}{9}$$

$$u^2 + \frac{1}{9}u + \frac{5}{6}u + \frac{5}{54}$$

$$u^2 + \frac{2u}{18} + \frac{15u}{18} + \frac{5}{54}$$

$$u^2 + \frac{17u}{18} + \frac{5}{54}$$