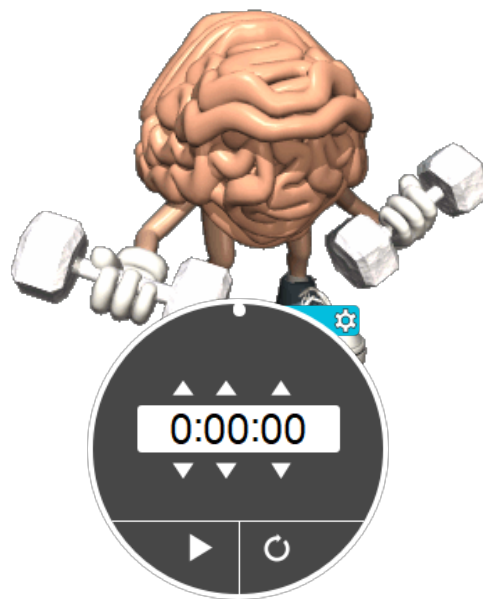


# Warm Up

Expand and Simplify

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



Any homework Questions

Page 186-187 4a,b, 5a,b , 8a (DID not get to-8b, 9ab, 15af,18ab, 21ab

5b)

$$(4f - 3g)(3f - 4g + 1)$$

$$12f^2 - 16fg + 4f - 9fg + 12g^2 - 3g$$

$$12f^2 - 25fg + 4f + 12g^2 - 3g$$

# Warm Up



Expand and Simplify

$$\begin{aligned}
 & (x-3)^2 - (x+2)^2 \\
 & (x-3)(x-3) \quad - \quad (x+2)(x+2) \\
 & x^2 - 3x - 3x + 9 \quad - \quad [x^2 + 2x + 2x + 4] \\
 & x^2 - 6x + 9 \quad - \quad [x^2 + 4x + 4] \\
 & \begin{array}{r}
 x^2 - 6x + 9 \\
 -x^2 - 4x - 4 \\
 \hline
 -10x + 5
 \end{array}
 \end{aligned}$$

Expand and Simplify

$$(x-3)^3 - (x+2)^2$$

$$\underbrace{(x-3)(x-3)}_{\text{FOIL}}(x-3)$$

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

$$(x^2 - 6x + 9)(x-3)$$

$$-(x+2)(x+2)$$

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

$$-x^2 - 4x - 4$$

$$x^3 - 3x^2 - 6x^2 + 18x + 9x - 27 - x^2 - 4x - 4$$

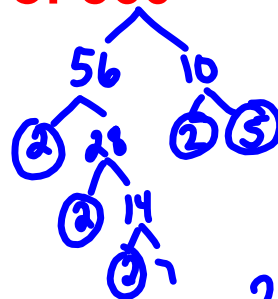
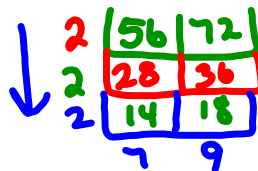
$$x^3 - 10x^2 + 23x - 31$$

Quiz on  
Wed



- Prime factorization

**Example: Prime factorization of 560**



$$2 \times 2 \times 2 \times 2 \times 5 \times 7$$

$$2^4 \times 5 \times 7$$

- Greatest Common Factor

**Example: 56, 72**

$$GCF(56, 72) = 2 \times 2 \times 2 = 8$$

Factor

**Example:  $(3xy + 6x^2y^3 - 24x)$**

$$3x(y + 2xy^3 - 8)$$

- Multiplying polynomials

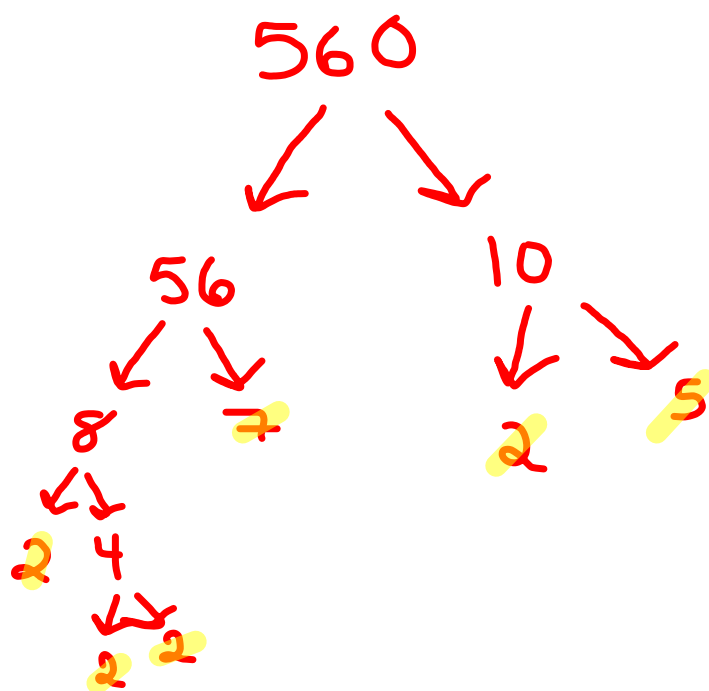
**Example:**

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

$$6x - 21 + 25x^2 + 15x + 15x + 9$$

$$= 6x - 21 + 25x^2 + 30x + 9$$

$$= 25x^2 + 36x - 12$$

**Example: Prime factorization of 560**

$$2^4 \times 7 \times 5$$

Prime factor

2, 7, 5

- Greatest Common Factor

**Example: 56, 72**

56

1, 56

2, 28

4, 14

7, 8

72

1, 72

2, 36

3, 24

4, 18

6, 12

8, 9

$$\text{GCF} = 8$$

Factor o

Example:  $(3xy + 6x^2y^3 - 24x)$

$$3x(y + 2xy^3 - 8)$$



- Multiplying polynomials

**Example:**  $3(2x-7) + (5x+3)^2$



Page 186-187

Questions 8b, 9cd, 15ace, 18c, 21a

pg 186  
8ab  
9d  
15ac

Page 149

Question 1ac, 2ab, ~~15~~

pg 149  
#lace  
#4a

Page 155

Questions ~~1c~~, 15b(iii,iv) 16<sup>d</sup>(e)f

pg 149  
#llabcde

Quiz Tomorrow  
ruierzsesd

15. Expand and simplify.

$$\text{a) } (3s + 5)(2s + 2) + (3s + 7)(s + 6)$$

$6s^2 + 6s + 10s + 10 + 3s^2 + 18s + 7s + 42$

$$(9s^2 + 41s + 52)$$

$$\text{b) } (2x + 3)(5x + 4) + (x - 4)(3x - 7)$$

$$(13x^2 + 4x + 40)$$

18. Expand and simplify.

a)  $(x - 2)^3$

$$(x-2)(x-2)(x-2)$$

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

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

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

$$(x^3 - 6x^2 + 12x - 8)$$

b)  $(2y + 5)^3$

$$(8y^3 + 60y^2 + 150y + 125)$$

19. Expand and simplify.

a)  $2a(2a - 1)(3a + 2)$

$$(12a^3 + 2a^2 - 4a)$$

b)  $-3r(r - 1)(2r + 1)$

$$(-6r^3 + 3r^2 + 3r)$$

c)  $5x^2(2x - 1)(4x - 3)$

$$(40x^4 - 50x^3 + 15x^2)$$

d)  $-xy(2x + 5)(4x - 5)$

$$(-8x^3y - 10x^2y + 25xy)$$



1

# Quiz

page 149

1 c, f

2 a, b

P 156

16 d e f

Pg 187

19 d, e

21 c

.

Factor the common factor out of each expression.

$$1) 42ba^3 + 30ba + 18b$$

$$6b(7a^3 + 5a + 3)$$

Factor the common factor out of each expression.

$$2) -182v^4 - 154v^4u + 140v^5u^3$$

$$14v^4(-13 - 11u + 10u^3v)$$



Factor the common factor out of each expression.

$$3) -33x^2y^3 + 39x^4y^4 + 24x^4y^3$$
$$3x^2y^3(-11 + 13x^2y + 8x^2)$$

Factor the common factor out of each expression.

$$7) \quad 14x^{10}y^2 - 7x^9y + 28x^8y^2$$

$$7x^8y(2x^2y - x + 4y)$$