

Name: _____

Algebra 10 Unit 7 Lesson 2

Multiplying Polynomials

DO NOW ~ Monday 10/21

Find the sum. Write your answer in standard form.

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

$$2x^3 + 7x + 0x^2$$



Classwork

Find the product.

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

$$4x^2 - 16x - 12$$

Find the product of the two binomials (FOIL)

$$(6b + 4)(8b + 4)$$

$$48b^2 + 24b + 32b + 16$$

$$48b^2 + 56b + 16$$

Find the product of the two binomials.

$$(8r - 7)(7r + 7)$$

Front
Outer

Inner

Last

$$56r^2 + 56r - 49r - 49$$

$$56r^2 + 7r - 49$$

Find the product.

$$(2t + 3)^2$$

$$(2t + 3)(2t + 3)$$

$$4t^2 + 6t + 6t + 9$$

$$4t^2 + 12t + 9$$

DO NOW ~ Tuesday 10/22

Find the product.

$$4m^3(4m + 2)$$

$$16m^4 + 8m^3$$



$$16a^3 + 8a^2 + 24a - 48$$

Classwork

Find the product.

$$(2v - 3)(8v^2 + 6v - 6)$$

$$16v^3 + 12v^2 - 12v$$

$$16v^3 - 12v^2 - 30v + 18$$

$$(8a^2 - 8)(2a^2 + 3a + 6)$$

$$16a^4 + 24a^3 + 48a^2 - 16a^3 - 24a^2 - 48a$$

Find the product of $x^2 + 8x + 12$ and $4x$

$$4/x \cdot (1 \cdot x^2 + 8x + 12)$$

$$4x^3 + 32x^2 + 48x$$

$$(x - 10)^2$$

$$(x - 10)(x - 10)$$

$$x^2 - 10x - 10x + 100$$

$$x^2 - 20x + 100$$

DO NOW ~ Wednesday 10/23

Find the product.

$$x^3 + 6x^2 + 11x + 6$$

Diagram showing the multiplication of $(x+2)(x^2+4x+3)$ using the distributive property. The terms are arranged in a sequence: $x^3 + 4x^2 + 3x + 2x^2 + 8x + 6$. The terms are grouped into pairs: $(x^3 + 4x^2)$, $(3x + 2x^2)$, and $(8x + 6)$. The final result is $x^3 + 6x^2 + 11x + 6$.



$$49x^2 + 56x + 16$$

Classwork

Find the product.

Diagram showing the multiplication of $(7x+4)(7x+4)$ using the distributive property. The terms are arranged in a sequence: $49x^2 + 28x + 28x + 16$. The terms are grouped into pairs: $(49x^2 + 28x)$, $(28x + 16)$, and the final result is $49x^2 + 56x + 16$.

Diagram showing the multiplication of $(6a-7)(-a+7)$ using the distributive property. The terms are arranged in a sequence: $-6a^2 + 42a + 7a - 49$. The terms are grouped into pairs: $(-6a^2 + 42a)$, $(7a - 49)$, and the final result is $-6a^2 + 49a - 49$.

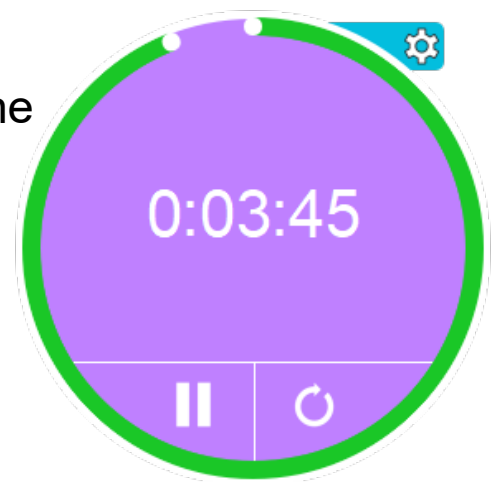
Diagram showing the multiplication of $(4v-6)(8v^2+5v+3)$ using the distributive property. The terms are arranged in a sequence: $32v^3 + 20v^2 + 12v - 48v^2$. The terms are grouped into pairs: $(32v^3 + 20v^2)$, $(12v - 48v^2)$, and the final result is $32v^3 - 28v^2 - 18v - 18$.

$$32v^3 - 28v^2 - 18v - 18$$

Diagram showing the multiplication of $(8r+3)(r^2-4r+7)$ using the distributive property. The terms are arranged in a sequence: $8r^3 - 32r^2 + 56r + 3r^2 - 12r + 21$. The terms are grouped into pairs: $(8r^3 - 32r^2)$, $(56r - 12r)$, and the final result is $8r^3 - 29r^2 + 44r + 21$.

To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

- 1) Be in your seat
- 2) Take out your calculator or grab one
- 3) Have last night's homework out
- 4) Complete the do now



DO NOW ~ Thursday 10/24

Find the product.

$$(-6m-7)(-2m+4)$$

$$12m^2 - 24m + 14m - 28$$

$$12m^2 - 10m - 28$$



Classwork

Find the product.

$$(-x-6)(4x+8)$$

$$-4x^2 - 8x - 24x - 48$$

$$-4x^2 - 32x - 48$$

$$(5n-6)^2$$

$$(5n-6)(5n-6)$$

$$25n^2 - 30n - 30n + 36$$

$$25n^2 - 60n + 36$$

$$(2m+1)(2m^2-m+8)$$

$$4m^3 - 2m^2 + 16m + 2m^2 - m + 8$$

$$4m^3 + 15m + 8$$

$$(2n-1)(4n^2-3n-1)$$

$$8n^3 - 6n^2 - 2n - 4n^2 + 3n + 1$$

$$8n^3 - 10n^2 + 1n + 1$$

Mrs. Ferreri's Station ~ Multiplying Polynomials**Find each product.**

$$(3x - 2)(5x - 1)$$

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

$$(7x + 6)(7x - 6)$$

$$(a + 5)(a - 5)$$

$$(4n + 1)(2n + 6)$$

$$(7k - 3)(k^2 - 2k + 7)$$

$$1) (7n + 7)^2$$

$$2) (3r - 1)^2$$

$$3) (m - 1)^2$$

$$4) (3 - 5p)^2$$

Continue onto next page.

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

2) $(7v - 5)(7v^2 - 2v - 5)$

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

4) $(8a + 7)(a^2 + 7a - 4)$

5) $(6b + 3)(2b^2 - 2b - 3)$

6) $(2k + 5)(8k^2 + 2k - 4)$

7) $(5p - 7)(6p^2 + 6p - 4)$

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

9) $(2n - 5)(2n^2 - 3n + 3)$

10) $(4m + 2)(2m^2 + 3m + 1)$

Computer Station ~ Delta Math

Complete the "Adding and Subtracting Polynomials" assignment.

Show your work here:

Mrs. Kennedy's Station ~ Multiplying Polynomials**Find each product.**

13) $(4x - 6)(4x + 6)$

14) $(a + 5)(a - 5)$

15) $(7x + 6)(7x - 6)$

16) $(2 + 4k)(2 - 4k)$

17) $(5x - 4)^2$

18) $(7 + 6p)^2$

11) $(2v - 3)(8v^2 + 6v - 6)$

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

Continue onto the next page.

7) $(8r - 7)(7r + 7)$

8) $(6b + 4)(8b + 4)$

9) $(3x + 7)(5x - 6)$

10) $(5n - 5)(3n + 7)$

1) $(x + 7)^2$

2) $(7r + 1)^2$

3) $(4n + 4)^2$

4) $(6b - 8)^2$

5) $(8a - 3)^2$

6) $(4v - 8)^2$

7) $(5n - 1)^2$

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

Independent Station ~ The Distributive Property**Simplify.**

1) $4(4r^2 - 3r + 6)$

2) $-4(8v^2 + 5v - 8)$

3) $-6(-8m^2 - 4m + 4)$

4) $-4(-4a^2 + 8a + 5)$

5) $-6(7n^2 + 8n - 7)$

6) $-6(-2m^2 - 4m - 1)$

7) $2(-7k^2 + 3k + 2)$

8) $-2(3k^2 - 7k + 2)$

9) $4(-8n^2 + 6n + 4)$

10) $2(-6p^2 - 2p - 2)$

11) $-2(8x^2 - 2x - 8)$

12) $-4(x^2 - x + 6)$

13) $-2(-n^2 - 8n - 6)$

14) $-4(p^2 + 4p + 5)$

15) $-7(8x^2 + 6x - 8)$

16) $6(7x^2 + x + 5)$

17) $-3(-7v^2 + 6v + 6)$

18) $-3(-3r^2 - r + 4)$

19) $4(-2n^2 + 8n - 7)$

20) $-(-3r^2 + 4r + 7)$

Continue onto the next page.

1) $3(2n^2 + 5n - 3)$

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

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

4) $2(4x^2 - 5x + 1)$

5) $3(n^2 + 2n + 3)$

6) $4(4x^2 - 2x - 2)$

7) $4(2b^2 - 4b + 4)$

8) $2(3a^2 - 5a - 5)$

9) $4(3r^2 + r + 4)$

10) $3(3a^2 + 3a + 1)$

11) $4(5n^2 + 5n + 5)$

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

13) $5(p^2 + 5p + 1)$

14) $5(5v^2 - v + 2)$

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

16) $2(3x^2 - 2x + 4)$

17) $3(5m^2 - 5m + 5)$

18) $2(5r^2 + r - 1)$

19) $4(4k^2 - 4k - 3)$

20) $3(4p^2 - 4p + 2)$

Homework ~ Monday 10/21*Simplify each expression.*

$$(6n - 2)^2$$

$$(6n - 4)(4n + 7)$$

$$(6b + 4)(8b + 4)$$

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

Homework ~ Tuesday 10/22*Simplify each expression.*

$$(3r + 1)(2r^2 - 8r - 1)$$

$$(x + 8)^2$$

$$(8m - 8)(3m - 8)$$

$$(6p - 7)(p + 2)$$

Homework ~ Wednesday 10/23*Simplify each expression.*

$$(7b - 8)(b + 3)$$

$$(2n + 2)(7n - 4)$$

$$(8 + 3a)^2$$

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

Homework ~ Thursday 10/24*Simplify each expression.*

$$(8k - 2)(3k - 4)$$

$$(p + 3)(2p - 8)$$

$$(4x + 8)^2$$

$$(7n + 5)(7n^2 + 8n + 5)$$