

## Bell Ringer

Tuesday 9/18

Given the expression  $2x - 3 + 8x^2 + 4x - 2x^2$  find the following:

1. Standard Form

$$\underline{6x^2} + \underline{6x} - \boxed{3}$$

2. Leading Coefficient

6

3. Name based on degree

2nd degree or  
quadratic

4. Name based on number of terms

trinomial

5. Constant

-3

# Update pink sheet - Quiz folders

Name \_\_\_\_\_

Standard	Essential Learnings	Form A	Form B	Form C
1A	I can simplify expressions with rational exponents.			
1B	I can simplify expressions with radicals and convert between radicals and rational exponents.			
2A	I can pull out the greatest common factor and factor expressions with four terms.			
2B	I can factor trinomials.	X		
3A	I can solve quadratic functions.			
3B	I can identify key features of quadratic functions.			
3C	I can write quadratic equations given points and graphs.			
3D	I can apply properties of quadratic functions to solve story/real life problems.			
3E	I can perform operations with complex numbers			
3F	I can solve systems of equations			

$1/8 = 13\%$

$2/8 = 25\%$

$3/8 = 38\%$

$4/8 = 50\%$

$5/8 = 63\%$

$6/8 = 75\%$

$7/8 = 88\%$

$8/8 = 100\%$

Score	0	5	6.5	8	10
	Student haven't done anything correctly	Student shows limited understanding	Student demonstrates partial understanding	Student demonstrates understanding but makes an error related to the standard	Student demonstrates complete mastery

## Go over Quiz 2B

Name: \_\_\_\_\_ Hr: \_\_\_\_\_

Standard 2B Form A  
(Factor with two and three Terms)

Factor Completely.

1.  $x^2 - x - 6$

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

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

- a.  $(x-6)(x+1)$
- b.  $(x-3)(x+2)$
- c.  $(x+3)(x-2)$
- d.  $(x-1)(x-6)$

2.  $6x^2 + 13x - 5$

~~$(6x^2 + 15x - 5)(-2x - 5)$~~

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

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

- a.  $(3x+5)(2x-1)$
- b.  $(6x-5)(x+1)$
- c.  $(6x+5)(x+1)$
- d.  $(3x-1)(2x+5)$

3.  $2x^2 - 18x + 40$

$2(x^2 - 9x + 20)$

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

~~$(x-4)(x-5)$~~

- a.  $(2x-10)(x-4)$
- b.  $2(x-10)(x+2)$
- c.  $2(x-5)(x-4)$
- d.  $(x-5)(x-4)$

4.  $15x^2 + 22x - 5$

~~$(15x^2 + 25x - 5)(-3x - 5)$~~

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

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

- a.  $5(3x-1)(x+1)$
- b.  $(5x+1)(3x-5)$
- c.  $(3x-1)(5x-1)$
- d.  $(5x-1)(3x+5)$

5.  $3x^2 - 6x + 3$

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

- a.  $3(x-1)^2$
- b.  $(3x-1)(x-3)$
- c.  $(3x+1)(x+2)$
- d.  $3(x+2)(x-1)$

6.  $2x^2 - 32$

$2(x^2 - 16)$   
 $(x)^2 (4)^2 x^2 + 0x - 16$   
 $2(x+4)(x-4)$

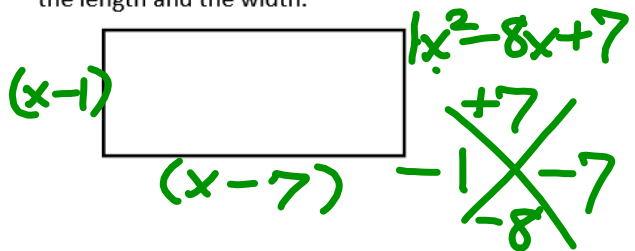
- a.  $2(x^2 - 16)$
- b.  $2(x-4)(x+4)$
- c.  $(2x+1)(x-16)$
- d.  $2(x-4)^2$

7.  $4x^2 - 9$

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

- a.  $4(x-3)(x+3)$
- b.  $(2x-3)^2$
- c.  $(2x-3)(2x+3)$
- d.  $(4x-1)(x-2)$

8. Given the area of the rectangle below is  $x^2 - 8x + 7$ . Find an expression that can represent the length and the width.



- a.  $(x-1) \times (x-7)$
- b.  $1 \times 7$
- c.  $1 \times 8$
- d.  $(x+1) \times (x-8)$

Please put answers here:

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_ 5. \_\_\_\_\_ 6. \_\_\_\_\_ 7. \_\_\_\_\_ 8. \_\_\_\_\_

**Rational** $\frac{17}{19}$   $\sqrt{\frac{4}{100}}$   $-\frac{3}{4}$   
 $-6.275$   $-\frac{9}{67}$   $3.2$   
 $0.123123123\ldots$ 

Sort into correct column

**Irrational** $\sqrt{5}$   
 $2\pi$   
 $\sqrt{30}$   
 $-5\pi$  $1.25697653784\ldots$

## Exponents Scavenger Hunt

# Due Wednesday

Name: \_\_\_\_\_ Hour: \_\_\_\_\_

Factoring Review

**Factor Completely.**

1.  $6x^2 + x - 15$

2.  $x^2 - 12x + 36$

3.  $2x^2 - 18$

4.  $12x^2 + 28x + 15$

5.  $28x^2 - 65x + 28$

6.  $42x^2 - xy - 30y^2$

7.  $15x^2 - x - 2$

8.  $x^2 - y^2$

9.  $21x^3 - 35xy^2$

10.  $6ax^2 + 11ax - 10a$

11.  $45 + 2x^2$

12.  $6x^2 - 10x - 4$

13.  $18x^2 + 9x + 1$

14.  $3x^2 - 12$

15.  $15x^2 - 16xy + 4y^2$

16.  $4x^3 + 12x^2 - x - 3$

17.  $10x^2 + 105xy + 270y^2$

18.  $3x^3 - x^2 - 12x + 4$

19.  $102 - 23x + x^2$

20.  $6x^2 + 2x + 6xy + 2y$

21.  $x^4 - 7x^3 - 18x^2$

22.  $2x^3 - 12x^2y + 18xy^2$

23.  $x^4 + 5x^2 + 6$

24.  $7x^2 - 112x$

25.  $15 + 78x - 72x^2$

26.  $36x^3y + xy^3 - 12x^2y^2$



## Unit 1 Practice Test (ch 1 and 2) - due Thursday

Name: \_\_\_\_\_ Hr: \_\_\_\_\_

Practice Test for Unit 1  
(Chapter 1 and 2)

1. Determine if  $\sqrt{49}$  is rational or irrational. **(1 pt)** 1. \_\_\_\_\_  
 a. Rational  
 b. Irrational
2. Determine if  $36^{\frac{1}{3}}$  is rational or irrational. **(1 pt)** 2. \_\_\_\_\_  
 a. Rational  
 b. Irrational
3. Find a value for  $n$  that makes the equation true. **(3 pts)** 3. \_\_\_\_\_  
 $(x^n)^{18} = x^9$

**Simplify. All exponents must be positive and variables only represented once. (3 pts each)**

4.  $2^{\frac{1}{2}} \cdot 2^{\frac{3}{4}}$  4. \_\_\_\_\_
5.  $\left(\frac{3}{4}\right)^3$  5. \_\_\_\_\_
6.  $(2x^5y^4)^3$  6. \_\_\_\_\_
7.  $2x^{-5}$  7. \_\_\_\_\_

**Simplify. All exponents must be positive and variables only represented once. (3 pts each)**

8.  $\frac{x^{\frac{1}{7}}}{x}$  8. \_\_\_\_\_
9.  $-5x^0$  9. \_\_\_\_\_
10.  $\left(\frac{12a^2b^2c}{4a^{-3}b^4c^4}\right)^{-3}$  10. \_\_\_\_\_
11.  $\frac{16x^{\frac{2}{5}}y^2z^{\frac{1}{3}}}{24x^{\frac{2}{15}}y^{-3}z^{\frac{1}{3}}}$  11. \_\_\_\_\_
12.  $(16n^6)^{\frac{3}{4}}$  12. \_\_\_\_\_

13. Rewrite the expression  $(3x^2y^3)^{\frac{1}{4}}$  in radical form. **(2 pts)** 13. \_\_\_\_\_14. Rewrite the expression  $\sqrt[5]{(2ab)^3}$  **(2 pts)** 14. \_\_\_\_\_

Given the polynomial  $4x - 3x^2 + 3x + 2 + 9x^2$  identify the stated information from the provided list below. (1 pt each)

a. $10x^2 + 3x + 2$	b. $(6x+1)(x+1)$	c. quadratic
d. 4	e. trinomial	f. $(3x+1)(2x+2)$
g. $6x^2 + 7x + 2$	h. 6	i. monomial
j. cubic	k. $(2x+1)(3x+2)$	l. 9
m. $(6x+2)(x+1)$	n. 2	o. linear
p. binomial	q. -3	

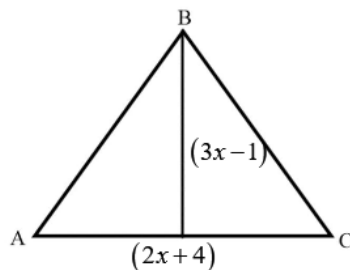
- 15. Standard Form 15. \_\_\_\_\_
- 16. Leading Coefficient 16. \_\_\_\_\_
- 17. Name based on degree 17. \_\_\_\_\_
- 18. Name based on # of terms 18. \_\_\_\_\_
- 19. Constant 19. \_\_\_\_\_
- 20. Factored Form 20. \_\_\_\_\_

Perform the operation and simplify. Write your answer in standard form. (3 pts each)

- 21.  $(5m^3 + 4m - 6) - (4m^2 - 2m + 1)$  21. \_\_\_\_\_
- 22.  $(3x + 5)^2$  22. \_\_\_\_\_
- 23.  $(4x + 5)(3x + 1)$  23. \_\_\_\_\_
- 24.  $(3x + 4)(7x^2 - 2x - 3)$  24. \_\_\_\_\_
- 25.  $(2a^2 - 4a - 3) + (a^2 + 8a - 5)$  25. \_\_\_\_\_

Find the AREA of  $\triangle ABC$ . Write your answer in standard form: (3 pts)

- 26. 26. \_\_\_\_\_



Factor each expression completely. (3 pts each)

27.  $n^2 - 7n + 10$

27. \_\_\_\_\_

28.  $4w^2 - 9$

28. \_\_\_\_\_

29.  $5x^3 + 20x^2 + 4x + 16$

29. \_\_\_\_\_

30.  $3y^2 + 3y - 6$

30. \_\_\_\_\_

31.  $12a^4 + 16a^3 - 8a$

31. \_\_\_\_\_

32.  $10m^2 + 9m + 2$

32. \_\_\_\_\_

33.  $w^2 - 100$

33. \_\_\_\_\_

34.  $6y^3 - 3y^2 - 2y + 1$

34. \_\_\_\_\_

Give one value of b that would make the following polynomial factorable. (4 pts)

35.  $x^2 + bx - 16$

35. \_\_\_\_\_

36. Mrs. Oswald writes the equation  $x^2 + 4x - 12$  on the board. Parks says that it can be factored to equal  $(x + 4)(x - 3)$ . Austin says that it cannot be factored at all. Which student do you agree with, if any, and why? (4 pts)

