

Bell Ringer

Wednesday 9/19	
<p>Factor.</p> <p>1. $x^2 - 81$</p> <p>$(x)^2 - (9)^2$ $(x+9)(x-9)$</p> <p>3. $3x^2 + 36$</p> <p><u>$3(x^2 + 12)$</u></p> <p>$x^2 + 0x + 12$</p> <p>$\begin{matrix} + & 12 \\ - & \\ \hline 0 \end{matrix}$</p>	<p>2. $3x^2 - 12$</p> <p>$3(x^2 - 4) = 3(x^2 - 2x + 2x - 4)$ $= 3(x+2)(x-2)$</p> <p>4. $4x^2 - 12x + 9$</p> <p>$(4x^2 - 6x)(-6x + 9) - 6$</p> <p>$2x(2x-3) - 3(2x-3) - 12$ $= (2x-3)(2x-3) = (2x-3)^2$</p> <p>$(x-7)^2 \quad x^2 - 14x + 49$</p>

Work Day!

- Work on Pink Factoring Review
due tomorrow, KEY on class website
- Work on Unit 1 Test Review
due tomorrow, KEY on class website
- Finish any missing hw

Yellow week
3&4 tracker due
tomorrow

2.5 ws
2.6 #s 1-12
2.7 #s 1-14
Pink Factoring Review
Practice Test /50

Cross of #26 on pink factoring review

Due Thursday

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. $56x^3 - x^3 - 1x^2y^2$

skip

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)

- a. Rational
- b. Irrational

1. _____

2. Determine if $36^{\frac{1}{3}}$ is rational or irrational. (1 pt)

- a. Rational
- b. Irrational

2. _____

3. Find a value for n that makes the equation true. (3 pts)

$(x^n)^{18} = x^9$
 $x^9 = x^9$ $n \cdot 18 = 9$
 $n = \frac{9}{18} = \frac{1}{2}$

3. $n = \frac{1}{2}$ $(x^{\frac{1}{2}})^{18} = x^9$

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

4. $2^{\frac{1}{2}} \cdot 2^{\frac{3}{4}}$

$2^{\frac{2}{4} + \frac{3}{4}} = 2^{\frac{5}{4}}$

4. $2^{5/4}$

5. $(\frac{3}{4})^3$

$\frac{3^3}{4^3} = \frac{27}{64}$

5. $\frac{27}{64}$

6. $(2x^5y^4)^3$

$2^3 x^{15} y^{12}$

6. $8x^{15}y^{12}$

7. $2x^{-5}$

$\frac{2}{x^5}$

7. _____

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

8. $\frac{x^{\frac{1}{7}}}{x}$

$x^{\frac{1}{7} - 1} = x^{-6/7}$

8. $\frac{1}{x^{6/7}}$

9. $-5x^0$

$-5(1)$

9. -5

10. $(\frac{12a^2b^2c}{4a^{-3}b^4c^4})^{-3}$

$(\frac{4^3 a^{-3} b^4 c^4}{12^3 a^2 b^2 c^1})^3$

$\frac{4^3 a^{-9} b^{12} c^{12}}{12^3 a^6 b^6 c^3} = \frac{b^6 c^9}{27 a^9}$

11. $\frac{16x^5y^2z}{24x^{15}y^{-3}}$

$\frac{2^4 x^5 y^2 z}{3 \cdot 2^3 x^{15} y^{-3}} = \frac{2^{4-3} x^5 y^2 z}{3 x^{15} y^{-3}}$

11. _____

12. $(16n^6)^{\frac{3}{4}}$

$16^{\frac{3}{4}} n^{\frac{9}{2}}$

12. $8n^{\frac{9}{2}}$

13. Rewrite the expression $(3x^2y^3)^{\frac{1}{4}}$ in radical form. (2 pts)

13. $\sqrt[4]{(3x^2y^3)^1}$

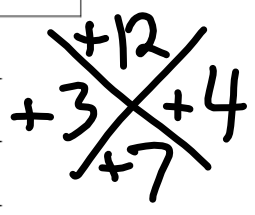
14. Rewrite the expression $\sqrt[5]{(2ab)^3}$ (2 pts)

14. $(2ab)^{\frac{3}{5}}$

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 $6x^2 + 7x + 2$ 15. g
16. Leading Coefficient 6 16. h
17. Name based on degree trinomial 17. c
18. Name based on # of terms 3 terms 18. o
19. Constant 2 19. l
20. Factored Form $3x(2x+1) + 2(2x+1)$ 20. k

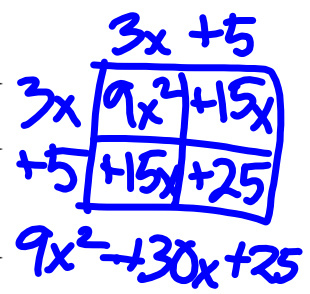


Perform the operation and simplify. Write your answer in standard form. (3 pts each)

21. $(5m^3 + 4m - 6) - (4m^2 + 2m - 1)$ 21. _____

22. $(3x+5)^2$ 22. _____

23. $(4x+5)(3x+1)$ 23. _____

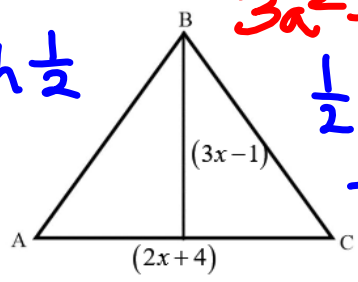


24. $(3x+4)(7x^2 - 2x - 3)$ 24. _____

25. $(2a^2 - 4a - 3) + (a^2 + 8a - 5)$ 25. _____

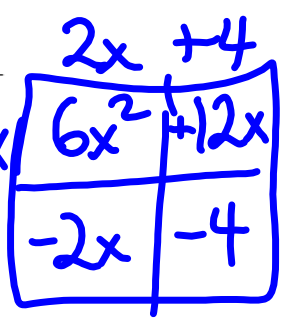
Find the AREA of $\triangle ABC$. Write your answer in standard form: (3 pts)

26. $A = bh \frac{1}{2}$



$2a^2 - 4a - 3$
 $1a^2 + 8a - 5$
 $3a^2 + 4a - 8$

$\frac{1}{2}(2x+4)(3x-1)$
 $\frac{1}{2}(6x^2 + 10x - 4)$
 $3x^2 + 5x - 2$



Factor each expression completely. (3 pts each)

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

27. _____

28. $4w^2 - 9$

$(2w+3)(2w-3) + 6 \cancel{36} / \cancel{6} \quad 4w^2 + 0w - 9$

28. _____

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

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

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

29. _____

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

$(x+1)(5x+10)$
 $5(x+2)$

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)

