Bell Ringer

Thursday 10/3

Solve each equation.

1. $x^2 - 5x = 24$

$-24 \quad -24$

$$x^2 - 5x - 24 = 0$$

$$(x+3)(x-8) = 0$$

$$\begin{array}{cc} x+3=0 & x-8=0 \\ -3 \ -3 & +8 \ +8 \end{array}$$

$$x = -3 \qquad x = 8$$

-24
$3 \quad -8$

2. $2x^2 - 5x - 18 = 0$

-36
$-9 \quad 4$

$$2x^2 - 9x + 4x - 18 = 0$$

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

$$(2x-9)(x+2) = 0$$

$$\begin{array}{cc} 2x-9=0 & x+2=0 \\ +9 \ +9 & -2 \ -2 \end{array}$$

$$\frac{2x}{2} = \frac{9}{2} \qquad x = \frac{9}{2} \qquad x = -2$$

3. $22y^2 - 11y = 0$

$$11y(2y - 1) = 0$$

$$\begin{array}{cc} \frac{11y}{11} = \frac{0}{11} & 2y - 1 = 0 \\ & +1 \ +1 \end{array}$$

$$y = 0 \qquad \frac{2y}{2} = \frac{1}{2}$$

$$y = \frac{1}{2}$$

1

2.8 online hw due today

Chapter 2 Review
Standard 2A: operations with polynomials and Standard 2B: factoring completely

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

1-linear
2-quadratic
3-cubic

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	

⭐ 1. Standard Form   ⭐ 2. Leading Coefficient   ⭐ 3. Name based on degree

$6x^2 + 7x + 2$ 6 *2nd degree - quadratic*

⭐ 11. $\left(2a^2 - 4a - 3\right) + \left(a^2 + 8a - 5\right)$

$\underline{+ a^2 + 8a - 5}$

$3a^2 + 4a - 8$

Type by term

Use the information to write an expression that represents the AREA of the shapes below. Write your answer in standard form:

★12.

$A = \dfrac{b \cdot h}{2}$ $\dfrac{1}{2} \cdot bh$

$(3x-1) = h$

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

$(2x+4) = b$
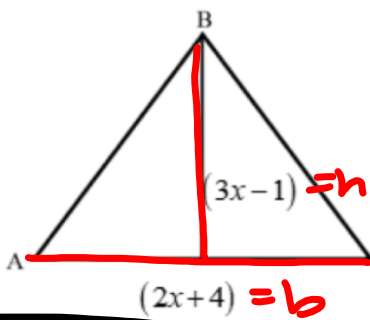
$A = \dfrac{bx^2 - 2x + 12x - 4}{}$

$\boxed{A = 3x^2 + 5x - 2}$

$A = \dfrac{6x^2}{2} + \dfrac{10x}{2} - \dfrac{4}{2}$

Factor each expression completely.

⭐ 18. $12a^4 + 16a^3 - 8a$

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

$$-6$$
$$+1 \quad -6$$
$$-1 \quad +6$$
$$+2 \quad -3$$
$$-2 \quad +3$$

Factor each expression completely.

⭐ 22. $4y^3 + 6y^2 - 100y - 150$

$2(2y^3 + 3y^2 - 50y - 75)$

$2\left[y^2(2y + 3) - 25(2y + 3)\right]$

$2(2y + 3)(y^2 - 25)$

$2(2y + 3)(y + 5)(y - 5)$

Solve for x.

⭐ 29. $\underline{w^2} - \underline{100} = 0$

$(\overset{-10}{w} + 10)(\overset{10}{w} - 10) = 0$

$w + 10 = 0 \qquad w - 10 = 0$
$\quad -10 \ -10 \qquad \quad +10 \ +10$
$w = -10 \qquad \qquad w = 10$

⭐ 32. The following expression represents the area of the photo below: $x^2 + 7x + 12$. What expression could represent the ~~base~~ base?

$(x + 3)$
10

$x^2 + 7x + 12$

$(x + 3)(x + 4)$

$+12$
∧
$+3$ $+4$

$(x + 4)$
11

If x = 7, find dimensions 10 × 11

due Monday

Name: _____Hr:_____

Chapter 2 Review
Standard 2A: operations with polynomials and Standard 2B: factoring completely

Given the polynomial $4x - 3x^2 + 3x + 2 + 9x^2$ **identify the stated information from the provided list below.**

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	

⭐ 1. Standard Form   ⭐ 2. Leading Coefficient   ⭐ 3. Name based on degree

4. Name based on # of terms   5. Constant   6. Factored Form

Perform the operation and simplify. Write your answer in standard form.

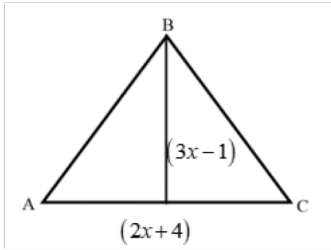7. $(5m^3 + 4m - 6) - (4m^2 - 2m + 1)$ 8. $(3x+5)^2$ 9. $(4x+5)(3x+1)$

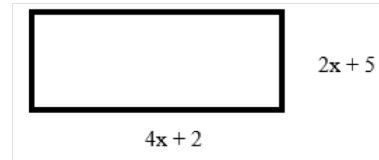10. $(3x+4)(7x^2 - 2x - 3)$ ⭐ 11. $(2a^2 - 4a - 3) + (a^2 + 8a - 5)$

Use the information to write an expression that represents the AREA of the shapes below. Write your answer in standard form:

⭐12.

13.

$2x + 5$

$4x + 2$

Factor each expression completely.

14. $n^2 - 7n + 10$ 15. $4w^2 - 9$ 16. $5x^3 + 20x^2 + 4x + 16$

17. $3y^2 + 3y - 6$ ⭐ 18. $12a^4 + 16a^3 - 8a$ 19. $2m^3 - 72m$

20. $3b^3 - 6b^2 + 4b - 8$ 21. $3n^2 + 10n - 8$ ⭐ 22. $4y^3 + 6y^2 - 100y - 150$

23. $24x^3 + 6x$ 24. $x^2 + 12x - 45$ 25. $d^2 - 16$

Solve for x.

26. $3x(x - 5) = 0$

27. $(2x - 1)(x + 7) = 0$

28. $x^2 + 16x + 64 = 0$

⭐ 29. $w^2 - 100 = 0$

30. $10m^2 + 9m + 2 = 0$

31. $2y^3 - y^2 - 2y + 1 = 0$

Give one value of b that would make the following polynomial factorable.

30. $x^2 + bx - 16$

31. Joe writes the equation $x^2 + 4x - 12$ on the board. Parks says that it can be factored as $(x + 4)(x - 3)$. Joe says that it cannot be factored at all. Which student do you agree with, if any, and why?

⭐ 32. The following expression represents the area of the photo below: $x^2 + 7x + 12$. What expression could represent the width?

$(x + 3)$
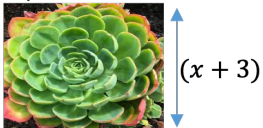
33. Find the following for the given expression $7x - x^3 + 2x - 3x^3 - 5x$

A) Standard form
B) Degree
C) Name based on number of terms
D) Leading coefficient
E) Constant