

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. $(3x + 5)^2$

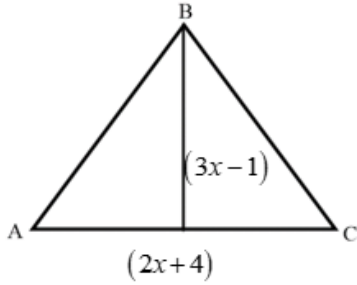
9. $(4x + 5)(3x + 1)$

10. $(3x + 4)(7x^2 - 2x - 3)$

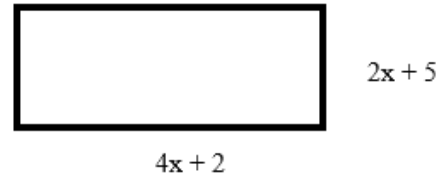
11. $(2a^2 - 4a - 3) + (a^2 + 8a - 5)$

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

12.



13.



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 base?



$(x + 3)$

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