Algebra 1 Name_____
Date_____

Chapter 9 Test Study Guide

Classify each as **M** (monomial), **B** (binomial), **T** (trinomial), **P** (polynomial), or **C** (constant).

1)._____7 2)._____ $4x^2 + 2$ 3)._____ $7x^6 + 4x^2 - 3x^2 + 8x - 3$

4)._____ mn^4 5)._____ $3x^2 - 4x + 2$ 6)._____ $x + 5$

Simplify and write each expression in standard form. Then name each polynomial by its degree and number of terms

7. $-2 + 12x^3 + 4x - 9x^2$

8. $2 - 4b^3 + 6$

9. $(2x^4 + 6x - 5) + (7x - 4 - x^4)$

10. $(2r + 8r^2 - 3) - (4r^2 - 6r - 2)$

11. $(x^2 + 4) - (x - 4) + (x^2 - 2x)$

12. $(x^2 + 15x + 13) + (3x^2 - 15x + 7)$

Factor out a monomial

13. $12c^3 - 30c^2$

14. $3y^3 - 8y^2 - 9y$

15. $6x^4 + 12x^2$

16. $8y^3 + 16y^2 - 8y$

Simplify each product using any method

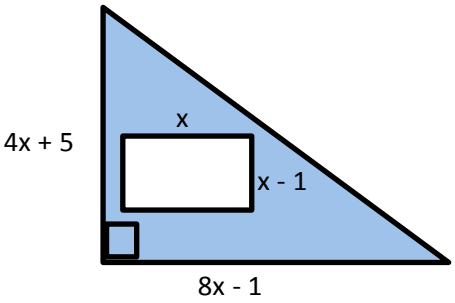
17. $5x(x-6)$

18. $(w-2)^2$

19. $(5c^2-7c)(5c^2+7c)$

20. $(x-5)(2x^2-7x-2)$

21. Find the area of the shaded region



22. $(2r^2-9r+11)(2r-1)$

**23. $(3r-2)^2(3r+2)$

***24. $(5x^4-4x^2+3x+7)(5x^8+3x^5-2x^3+7x^2-3x+2)$

Factor completely: use any method you want

25. $d^2 + 8d + 7$

26. $c^2 - c - 6$

27. $g^2 + 10g + 24$

28. $y^2 - 23y + 60$

29. $18x^2 - 27x + 4$

30. $6t^2 - 11t + 4$

31. $12y^2 + 19y + 5$

32. $3x^2 - 10x + 8$

33. $16y^2 - 56y + 49$

34. $2a^3 + 40a^2 + 200a$

35. $p^2 - 400$

36. $256x^2 - 1$

37. $10x^2 - 3x - 1$

38. $4x^3 - 20x^2 + 3x - 15$

39. $5p^3 - p^2 + 15p - 3$

40. $ab + 7b - 3a - 21$

41. $8x^4 + 6x - 28x^3 - 21$

42. $28x^3 + 212x^2 + 112x$