Algebra 1   Name_____

                                                             Date_____

Quiz 9.1-9.4 Study Guide

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

1)._____ $2x+1$

2)._____ $17x^2+11$

3)._____ $8x^3+2x^2+3x-7$

4)._____ -130

5)._____ $4a^2+7a-10$

6)._____ $10x^3-2x+1$

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

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

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

9. $(2x^4+3x-4)+(-3x+4+x^4)$

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

11. $(19x^2+12x+12)+(7x^2+10x+13)$

12. $(4x^2-6x+7)+(-19x^2-15x-18)$

13. $(20x^2+15x+13)+(-19x^2+17x+5)$

14. $(9x^6-4x^5)+(10x^5-15x^4+14)$

15. $(6x + 14) - (9x + 5)$

16. $(19x^2 + 9x + 16) - (5x^2 + 12x + 7)$

17. $(17x^2 + 7x - 14) - (-6x^2 - 5x - 18)$

18. $(-18x^2 + 4x - 16) - (15x^2 + 4x - 1)$

Factor

19. $-2x^4 - 4x^3 - 16x^2$

20. $16b^4 - 4b^3 + 8b^2$

21. $3x^3 + 9x^2$

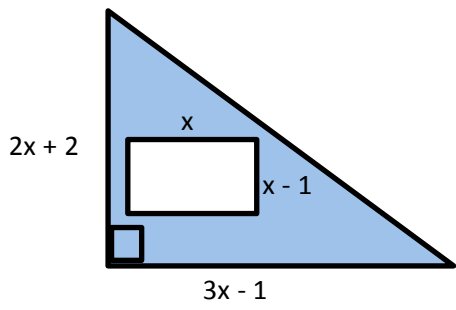22. $10y^3 + 5y^2 - 15y$

Simplify each product using any method

23. $(x + 3)(x - 6)$

24. $(2b - 4)(3b - 5)$

25. $(3x - 4)(3x^2 + x + 2)$

26. $(m^2 - 7m - 6)(7m^2 - 3m - 7)$

27. Find the area of the shaded region

2x + 2

x

x - 1

3x - 1

28. $(y + 9)^2$

29. $(2h - 7)^2$

30. $(p^3 - 7)(p^3 + 7)$