Name__________________________Class______________Date_____________________

Chapter 9 Review

Write each polynomial in standard form. Then name each expression based on its degree (linear, quadratic, cubic, or constant) and number of terms (monomial, binomial, trinomial.

1. $2x + 5x^2 + 1$

2. $y^2 - 4y^3 - 7y^2$

Add to standard form.

Subtract to standard form.

3. $(x^2 - 3x + 5) + (x^2 + 2x - 3)$

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

Multiply to standard form.

5. $-7x(3 - x + 6x^3)$

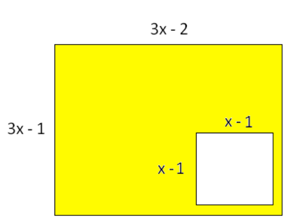
6. $(y + 4)(y - 4)$

7. $(a + 3)^2$

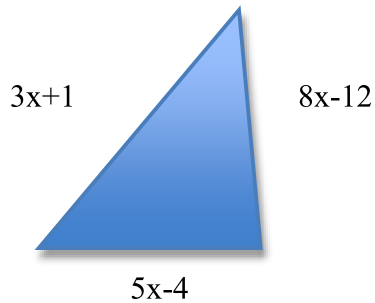
8. $(2y - 8)(y - 4)$

9. $(x - 1)(x^2 + 6x + 4)$

10. Find the area of the shaded region.



11. Find the perimeter in terms of x.



Factor each expression *COMPLETELY*.

12. $12n^2 + 4n - 1$

13. $y^2 + 18y + 81$

14. $x^2 - 8x - 20$

15. $y^2 - 144$

16. $2x^2 - 17x + 15$

17. $9x^2 - 64$

18. $6y^2 - 12y^3 + 36y^4$

19. $3x^3 - 75x$

20. $4x^2 + 16x - 48$

21. $6x + 30$