

Pre-Quiz for 8.1 – 8.4: Work on scrap paper.

Name each polynomial by the degree and the number of terms. Circle or box your final answer.

1. $5x^2y$

2. $6a^3 - 3a$

3. $3 - 2x + 10x^5$

Simplify each sum or difference. Circle or box your final answer.

4. $(-3n^2 + 10n - 5) + (7n^2 + 1)$

5. $(-3y + 7) - (12y^4 + 2y^3 + 10y - 9)$

6. The perimeter of a rectangle is $30b + 50$. The height of the rectangle is $5b + 10$. What is the length of the rectangle? (HINT: draw a picture and label sides)

Simplify each product. Circle or box your final answer.

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

8. $(3a + 7)(a + 2)$

9. $(2n + 9)(2n - 9)$

10. $(3x + 4)(5x^2 - 4x + 1)$

11. $(x - 9)^2$

12. $(3x + 2)^2$

13. $(x + y)^2$

14. $(2x + 5)^2 - (x + 2)^2$

15. A square has side length $(5n + 3)$ inches. What is the area of the square?

Factor each polynomial. Circle or box your final answer.

16. $20x^2 - 35x^3 + 5x$

17. $-3a - 6$

18. $25a^3b^5 - 32a^5b^{12} + 12ab^4$

19. $-3x^4 + 6x^3 - 3x^2$

20. $-12abc - 20ab^3c$

21. $23h^3k^6 - 69h^3k^2 + 46h^5k^5$