

Honors Algebra 1 Unit 9 Practice Test

Name _____

Date _____

Write the following polynomials in standard form.

1. $2r + 3r^2 - 5$

2. $9 - 3m^2 - m^3 + 2m$

3. $8ab^2 - 3a^2b + 4b^3$

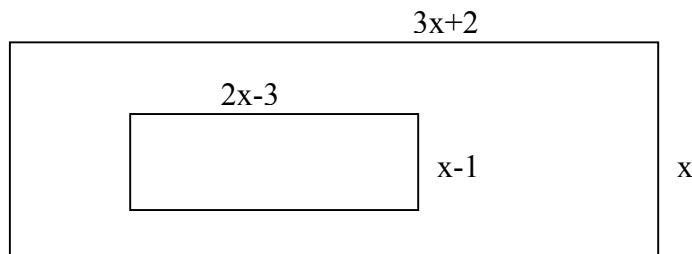
Find each sum or difference.

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

5. $(3x^2 + 4xy - 5y) + (2x^2 + 7y)$

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

7.



- Find the polynomial expression that represents the perimeter of the larger rectangle.
- Find the polynomial expression that represents the perimeter of the smaller rectangle.
- Find the difference between the perimeters of the two rectangles.

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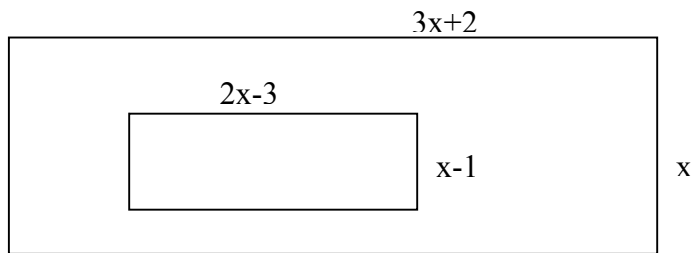
Expand and simplify. Show all steps.

8. $(x + 1)^2$

9. $(t + 4)(t - 4)$

10. $(2x - 3)(x - 2)$

11.



- Find the polynomial expression that represents the area of larger rectangle.
- Find the polynomial expression that represents that area of the smaller rectangle.
- Find the polynomial expression that represents the difference in the areas of the two rectangles.

12. List the factor pairs -24. Which pair adds to +5?

13. Find three different values for b so that the quadratic expression $x^2 + bx + 36$ can be factored.

14. Does $(r + s)^2 = r^2 + s^2$? Why or why not? Prove it.

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15. Charlie claims that $x^2 - 5x - 6$ can be factored two ways: $(x - 2)(x - 3)$ or $(x + 1)(x - 6)$. Do you agree with Charlie? Why or why not?

Factor completely.

16. $y^2 + 12y + 32$

17. $2x^2 - 8$

18. $3(c + d) - a(c + d)$

19. $5x^2 - 15x + 10$

20. $3p^2 - 2p - 5$

Solve by factoring.

21. $a^2 - 2a - 35 = 0$

22. $y^2 + 12y = -32$

23. $d^2(d + 5) - 4(d + 5) = 0$ (hint: there are 3 possible solutions)