ALGEBRA UNIT 1 **HW DAY 3 MULTIPLYING POLYNOMIALS**

Simplify the following. Answers should be in standard form.

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

2. $x^2(x + 6) + 1$

3. $-5w^3(4w^5 - 2w^3 - 11)$

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

5. $(y - 5)(2y + 3)$

6. $(4b - 3)(b - 7)$

7. $(3k^5 - 1)(4k^5 + 9)$

8. $(p - 2)(p^2 + 3p - 1)$

9. $(5x - 4 + 2x^2)(3 + 4x)$

10. Find the area of a rectangle that has a length of x + 5 and a width of 2x – 9.

11. Which expression is equivalent to $(x^2 + 3x - 4)(x - 5)$?

(1) $x^3 + 8x^2 - 19x + 20$

(2) $x^3 - 2x^2 - 19x + 20$

(3) $x^3 - 2x^2 - 11x + 20$

(4) $x^3 - 8x^2 - 11x + 20$

12. What is the sum of $(x + 1)$ and $(2x^2 + 3x - 1)$?

(1) $2x^3 + 5x^2 + 2x - 1$

(2) $2x^2 + 4x$

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

(4) $8x^2 + 2x - 1$

13. If $2a^2 - 6a + 5$ is subtracted from $3a^2 - 2a + 3$, the result is

(1) $a^2 + 4a - 2$

(2) $a^2 - 8a + 8$

(3) $5a^2 - 8a + 8$

(4) $-a^2 - 4a + 2$

14. Samuel's Car Service will charge a flat travel fee of $4.75 for anyone making a trip. They charge an additional set rate of $1.50 per mile that is traveled. What is an equation that represents the charges?

(1) $y = 1.5x + 1.5$

(2) $y = 4.75x + 4.75$

(3) $y = 1.5x + 4.75$

(4) $y = 4.75x + 1.5$