Algebra 10-4 Multiplying Polynomials

Multiply and simplify.

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

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

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

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

5. $(3x^4 - 2x^2)(5x^4 - 6x^2 + 1)$ _____

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

7. $3x(x - 4) + (x - 4)(x + 2)$ _____

8. $5(x + 2)(x + 2) + x(3x - 4)$ _____

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

10. $(4n + 5y)(3n + 2y + 7t)$ _____

11. A pool's length, L, is 3 times what its width is. If the pool's length and width are each increased by 2 meters, what expression represents its new area?

    _____

12. A room is *x* meters long and *w* meters wide; thus, it has an area of *xm* square meters. If the length is increased by 4 meters and the width is increased by 2 meters,

    a.) what is the new area? _____

    b.) how much more is the new area than the old area? _____

    c.) See if this is true by calculating the old area and the new area if the original room had a length of 5 meters and width of 4 meters.

    Old Area = _____ New Area = _____

    Difference = _____