Lesson 2.5 - Putting together some ideas.

Date_____

Expand and Simplify

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

2) $5(x^2 + 2x - 7) + 3x(x + 1)$

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

4) $5y(1 - y) + 3(2y^2 - 4y + 3)$

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

6) $2x(3x^2 - 4x + 2) - 7x^2(8x - 2) + 3(x^2 + 3x + 1)$

Simplify. Your answer should contain only positive exponents.

7) $(qm^3p^2)^0$

8) $(2x^3)^4 \cdot (5x^3)^2$

9) $(2k^4)^3 \cdot (3k^2)^3$

10) $(xy^2)^4 \cdot (2x^3y^8)^2$

11) $(x^8y^3)^0 \cdot (2y^{10})^{10}$

12) $(2y^3)^9 \cdot (2x^2y^5)^3 \cdot 2xy^6$

Divide the monomial into each term of the polynomial.

13) $\dfrac{15x^3y^4 + 50xy}{5xy}$

14) $\dfrac{8k^4 + 32k^3 - 72k^2}{8k}$

15) $\dfrac{-18m^2n - 6mn^2 - 20m}{-2m}$

16) $\dfrac{30m^3n^7 - 30m^6n^4 + 27m^3n^6 - 15m^4n^4}{3m^3n^4}$