Unit 5: Polynomials Day 8

Math 9 Principles

5-6 I can factor polynomials using the Greatest Common Factor (GCF) method.

Factor each expression. Be sure to show each of three steps:
a) Factors of each term written, GCF circled.
b) Expression is rewritten with GCF
c) Factor out the GCF and write as a product.
Circle each answer.

1) $8x^3 + 12x^2$	2) $-6x^4 - 18x^3$
3) $3x^2 - 18x$	4) $-4x - 16$
5) $12x^3y - 18x^2y^2$	6) $x^3 - 9x^2 + 3x$
7) $9x^3 + 12x^2 + 3x$	8) $4x^3 + 12x^2 + 16x$

9) $12x^3y^2 - 9x^2y^3 + 3x^2y^2$	10) $15a^3b^2 - 6a^3b + 12a^2b^2$
11) $10x^3y + 25x^2y^2 - 35xy^3$	12) $6a^4b^2 - 3a^2b^2 - 21a^2b$

Simplify the following.

13) $-(x + 4) - 3(x + 2)$	14) $(x - 3)(x + 3) - 2(x - 4)$
15) $3(3x - 2) - 2(3x + 4)$	16) $6x(x + 3) - 2x(2x + 1)$
17) $(x - 4)(x + 3) - 5(x - 3)$	18) $(x - 2)(x + 4) - 2(x + 3)$