Name _____ Date _____ Class _____

LESSON 4-3

Subtracting Polynomial Expressions

Practice and Problem Solving: C

Simplify.

1. $(ab^2 + 13b - 9) - (6 - 4a + 3ab^2) + (a + 7b)$

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

3. $(-r^2 + 8pr - p) - (-12r^2 - 2pr) + (8p + 3r^2)$

4. $(rs^2 - s - 6) + (2rs^2 - 3s + 1) - (s + 4rs^2)$

5. What algebraic expression must be subtracted from the sum of $y^2 + 5y - 1$ and $3y^2 - 2y + 4$ to give $2y^2 + 7y - 2$ as the result?

Give an example for each statement.

6. The difference of two binomials is a binomial.

7. The difference of two binomials is a trinomial.

Solve.

8. Ned, Tony, Matt, and Juan are playing basketball. Ned scored $2p + 3$ points, Tony scored 3 more points than Ned, Matt scored twice as many points as Tony, and Juan scored 8 fewer points than Ned. Write an expression that represents the total number of points scored by all four boys.

9. Mr. Watford owns two car dealerships. His profit from the first can be modeled with the polynomial $c^3 - c^2 + 2c - 100$, where c is the number of cars he sells. Mr. Watford's profit from his second dealership can be modeled with the polynomial $c^2 - 4c - 300$.

   a. Write a polynomial to represent the difference of the profit at his first dealership and the profit at his second dealership.

   b. If Mr. Watford sells 45 cars in his first dealership and 300 cars in his second, what is the difference in profit between the two dealerships?

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