



Algebra II Practice Test
Unit 1: Basic Properties and Definitions

Name _____

Date _____

1. Simplify: $5 \cdot 2^3 - 4 \cdot 3^2$

2. Reduce: $\frac{210}{231}$

3. Simplify as much as possible:
 $2 - 5(7 - 4) - 6$

4. Each sequence shown here is an arithmetic sequence. Find the next two numbers in each sequence.

a) 10, 16, 22, ...

b) $\frac{1}{2}, 1, \frac{3}{2}, \dots$

c) 5, 0, -5, ...

5. Simplify and write in scientific notation:

$$\frac{4.8 \times 10^9}{2.4 \times 10^{-3}}$$

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

7. Expand: $(2x + 7)^2$

8. Factor: $x^3 + 2x^2 - 9x - 18$

9. Factor: $x^2 - xy - 12y^2$

10. Factor: $27x^3 + 125y^3$