

Unit 4: Equations and Expressions

ADVANCED

Name: _____ Date: _____

Show all work. Write each answer as an exact value (integer, fraction in lowest terms, or decimal as indicated).

1. Evaluate the expression $4^3 - 2 \times 3^2 + 5$.

Answer: _____

2. Solve for x: $7x - 12 = 5x + 30$.

Answer: _____

3. Solve for y: $y/4 + 9 = 23$.

Answer: _____

4. A number n satisfies $3(n + 4) = 2n + 27$. Find n.

Answer: _____

5. Evaluate $2^5 + \sqrt{81} - 6^2$.

Answer: _____

6. Solve for x: $0.5x + 3.75 = 12.25$.

Answer: _____

7. The expression $5(2x - 3)$ is equivalent to $10x - k$. Find the value of k.

Answer: _____

8. Evaluate the expression $3m^2 - 4n$ when $m = 5$ and $n = 8$.

Answer: _____

9. Solve for x: $(2/3)x - 7 = 9$.

Answer: _____

10. Write $12x + 18$ as an equivalent expression of the form $a(2x + 3)$ using the greatest common factor. What is the value of a?

Answer: _____