

Unit 6: Expressions and Equations

ADVANCED · SET 2

Name: _____ Date: _____

Show all your work. Write each answer as an exact number, fraction, or short value.

1. Evaluate the expression $3 \times (2^4 - 6) + 4^2 \div 8$.

Answer: _____

2. Write an expression for 'the product of 7 and a number x, decreased by 9', then evaluate it when $x = 6$.

Answer: _____

3. Solve for x: $x/4 + 15 = 42$.

Answer: _____

4. Solve for m: $8m - 13 = 5m + 26$.

Answer: _____

5. Evaluate $2^5 + 3^3 - \sqrt{64}$.

Answer: _____

6. Apply the distributive property and simplify: $6(3x + 5) - 4x$. Write the simplified expression.

Answer: _____

7. Solve for y: $5(y - 3) = 2y + 18$.

Answer: _____

8. Evaluate the expression $a^2 - 3b + c$ when $a = 5$, $b = 4$, and $c = 2$.

Answer: _____

9. A number n satisfies $7n - 12 = 4n + 33$. Find n.

Answer: _____

10. Evaluate $(12 + 3 \times 2^3) \div 9 + 2^2$.

Answer: _____

11. Solve for x: $\frac{2}{3}x = 18$.

Answer: _____