Name:

MAC1105 Section 1A26
Exam 2 Review (NOT FOR A GRADE)

Please show all of your work in a NEAT and ORGANIZED fashion.

1. Evaluate the expression.
$$\left(\frac{1}{3}\right)^{-4}$$

2. Simplify the expression and write your answer using only positive exponents.
$$\frac{(2ab^3)^4(3a)^{-2}}{a^2b^2}$$

3. Write in radical form and evaluate.
$$(-64)^{-2/3}$$

4. Simplify the radical. Assume all variables represent positive real numbers.
$$\sqrt{18a^5b^2c^6}$$

5. Simplify the expression completely using the rules for radicals.

$$(\sqrt{3} \cdot \sqrt{30}) + 3\sqrt{\frac{100}{81}} + \sqrt[4]{\sqrt[3]{12}}$$

6. Multiply and simplify the resulting radical.

$$\sqrt[3]{2x^2} \cdot \sqrt[3]{3x}$$

7. Simplify the expression.

$$4\sqrt{5} + \sqrt{20} - \sqrt{80}$$

8. Multiply and simplify.

$$(\sqrt{7} + 7)(\sqrt{7} - 7)$$

9. Solve the linear equation.
$$\frac{1}{2}(8x - 2) = 2(2x + 3) + 1$$

10. Solve the linear equation.
$$3(2x - 8) = 12 - (x + 1)$$

11. Solve the linear equation.
$$\frac{1}{2}(12x + 18) - (x + 3) = 5x + 6$$

12. Solve the equation $15a = 5ad + 3bd - 11c$ for d.

13. Solve the quadratic equation.
$$3x^2 + x - 10 = 4$$

14. Solve the quadratic equation.
$$(x-6)^2 = \frac{9}{4}$$

15. Solve the quadratic equation by completing the square.
$$4x^2 - 40x - 8 = 0$$