

Name _____

University of Baltimore
Math 107: College Algebra
Homework: Sections R.5-R.7(C)

Date _____

BECAUSE THIS IS A GRADED ASSIGNMENT, YOU ARE NOT ALLOWED TO EITHER GIVE OR RECEIVE HELP IN ANSWERING THESE QUESTIONS.

Answer each question as indicated. **Think** first, then write. **Show all your work**, and remember to **check** your answers! Place your answers in the spaces provided at the right.

1. a) Find the quotient (simplest form): $\frac{y^3 + 3y^2 - y - 3}{y^2 - y - 2} \div \frac{y + 3}{1 - y}$. b) State restrictions on the variable.

1a. _____

1b. _____

2. a) Perform the subtraction (simplest form): $\frac{p + 2}{p} - \frac{p - 2}{p - 1}$. b) State the domain (interval notation).

2a. _____

2b. _____

3. Evaluate $a^{-3} + b^2 - b^0$ for $a = -2$, $b = -3$.

3. _____

4. Simplify $\frac{4m^{-3}n^{-5}}{12m^2n^{-4}}$. Write your answer using only positive exponents.

4. _____

5. Simplify: $-\left(\frac{9}{x^2}\right)^{-\frac{3}{2}}$. Write your answer using only positive exponents.

5. _____

6. Simplify: $2\sqrt{32} + 4\sqrt[3]{-32}$.

6. _____

7. Multiply and simplify: $(\sqrt{7} + 3)^2$.

7. _____

8. Use what you know of exponents and roots (and their properties) to evaluate $\frac{10^{-5} * \sqrt{100}}{100^2 * \sqrt[3]{1000}}$.

8. _____