

NAME \_\_\_\_\_

**MATH 096 REVIEW Free Response  
CHAPTER 5**

**Evaluate the expression.**

1)  $(-7)^3$

1) \_\_\_\_\_

2)  $-3^3$

2) \_\_\_\_\_

3)  $2^{-3}$

3) \_\_\_\_\_

**Simplify the exponential expression. Write the result using only positive exponents.**

4)  $(3x^9)(-7x^4)$

4) \_\_\_\_\_

5)  $\frac{y^{12}}{y^7}$

5) \_\_\_\_\_

$$6) \left( \frac{x^5 y^2}{x^6 y^{-4}} \right)^2$$

6) \_\_\_\_\_

$$7) \frac{5^3 x^{-2} y^4}{5^6 x^{-5} y^8}$$

7) \_\_\_\_\_

**Express the number in scientific notation.**

8) 26,000

8) \_\_\_\_\_

9) 0.000030015

9) \_\_\_\_\_

**Write the number in standard form.**

10)  $9.66 \times 10^{-4}$

10) \_\_\_\_\_

11)  $8.26 \times 10^5$

11) \_\_\_\_\_

**Simplify. Write the answer in standard form.**

12)  $(5.1 \times 10^{-3})(8 \times 10^{-2})$

12) \_\_\_\_\_

**Simplify by combining like terms.**

13)  $4x^2 + 3xy - 9x^2 + 14 + 2xy$

13) \_\_\_\_\_

**Perform the indicated operation.**

14)  $(-9x^3 - 9x^2 + 2x - 7) + (-6x^3 + 5x - 5)$

14) \_\_\_\_\_

15)  $(8x^3 - 3x^2 + 2x + 8) - (3x^3 - 5x^2 + 9x - 2)$

15) \_\_\_\_\_

**Multiply.**

16)  $(7x - 1)(x^2 - 2x + 1)$

16) \_\_\_\_\_

17)  $7x^2(2x^2 + 7x - 3)$

17) \_\_\_\_\_

18)  $(x - 6)(-2x - 4)$

18) \_\_\_\_\_

19)  $(3x - 7)^2$

19) \_\_\_\_\_

20)  $(x^2 - 8b)(x^2 + 8b)$

20) \_\_\_\_\_

**Divide.**

21)  $\frac{5x^2 + 3xy - 4x}{15xy}$

21) \_\_\_\_\_

22)  $(x^2 + 15x + 54) \div (x + 6)$

22) \_\_\_\_\_

23)  $\frac{64x^3 + 8}{4x - 2}$

23) \_\_\_\_\_

**Solve the problem.**

24) Use synthetic division to divide  $(5x^4 - 2x^3 + x - 5)$  by  $(x - 8)$ .

24) \_\_\_\_\_

25) If  $P(x) = x^5 + 6x^4 + 3x^3 - 8$ , use the remainder theorem to find  $P(-4)$ .

25) \_\_\_\_\_