MAT 050 Practice Test Chapter 12

All test answers are to be in simplest form. A calculator may be used.
Cell phones, iPads, and other electronic devices with scanning or photo ability may NOT be used.
No notes, no books, no homework may be used while taking this test.

Evaluate each expression.

1) 12^0

2) -3^2

3) $\left(\frac{4}{5}\right)^3$

4) $(0.8)^3$

5) -14^0

6) 2^{-4}

7) $\left(\frac{1}{4}\right)^{-3}$

Find the degree of the following polynomial.
Determine whether it is a monomial, binomial, trinomial, or none of these.

8) $2y^3 - 2y^2 - y$
Degree = _____
Type of Polynomial _____

9) $2x^6 - 7x^7 + 8x^2 - 8$
Degree = _____
Type of Polynomial _____

10) $(4a^4 - 7a^3)$
Degree = _____
Type of Polynomial _____

Simplify the expression.
Assume that variables represent nonzero numbers.
Write the answer using positive exponents.

11) $(r + 4s - 5) + (-4r + s) + (s - 4)$

12) $(20x^4 + 11x^2) - (-13x^4 + 4x^2)$

13) $(-8y^4 + 3y^6 + 5 - 2y^5) - (8 - 7y^5 + 5y^6 + 6y^4)$

14) $(7s + 14t) + (4t - 3s)$

15) $7n^4 \cdot -2n^7$

16) $6^{-1} \cdot 6^3 \cdot 6^{-4}$

17) $(2y)^6 (2y)^5$

18) $m^7 \cdot m^9 \cdot m^6$

19) $y^{-6} \cdot y^{-3}$

20) $(p^8)^4$

21) $(w^9)^2(9w^5)$

22) $(r^{-9}t)^{-4}$

23) $(-4x^4y^5)^2$

24) $(3p^3)^2$

25) $\frac{1}{(xy)^{-6}}$

26) $(2p^7)^{-2}$

27) $\left(\frac{x}{5}\right)^2$

28) $\left(\frac{xy^7}{z^7}\right)^0$

Simplify the expression.
Assume that variables represent nonzero numbers.
Write the answer using positive exponents.

29) $\left(\frac{4a}{b}\right)^{-2}$

30) $\left(\frac{5y}{3}\right)^{3}$

31) $-8(9x + 6)$

32) $-2x^6(-10x^7 - 7x^4)$

33) $(x + 4)(x - 4)$

34) $(4x - 10)(x + 1)$

35) $(x + 5)(x^2 - x + 7)$

36) $(x^2 - x - 3)(x - 1)$

37) $(6x + 5y)(6x - 5y)$

38) $(n + 16)^2$

39) $(w - 3)^2$

40) $(-4x - 9)^2$

Write the expression in standard form.

41) 2.241×10^5

42) 2.0860×10^7

43) 2.55×10^{-4}

44) 1.221×10^{-5}

Write the expression in scientific notation.

45) 535

46) 18,000,000

47) 0.000281

48) 0.00002768

Divide.
Assume that variables represent nonzero numbers.
Write the answer using positive exponents.

49) $\frac{3x^8}{x^4}$

50) $\frac{20x^3}{-4x^9}$

51) $\frac{a^6 - a}{a}$

52) $\frac{8x^4 - 10x^3 + 4x^2}{x^2}$

53) $\frac{7x^2 - 3x + 1}{21x}$

54) $\frac{12x^3 - 32x^2 - 20x + 5}{4x}$