Math 131 Group Review Assignment (5.5)

Print Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. Write your answer in the blank provided and record your answer on the scantron answer sheet. (You will not be getting the scantron answer sheet back.) If a question appears to not have instructions, the instructions for the previous question apply. A specific method of solving an equation may be given but you can use any method you choose. Good luck and have fun!

Solve the exponential equation.

1) $2^{(10 - 2x)} = 16$

    A) –3

    B) 8

    C) 5

    D) 3

1) _____

2) $16 = 4^{3x} \cdot 16^{x^2}$

    A) –2 , –4

    B) $-2 , \dfrac{1}{2}$

    C) 2 , 4

    D) $2 , -\dfrac{1}{2}$

2) _____

3) $4^x = 15$

    A) 1.953

    B) 1.322

    C) 3.750

    D) 0.512

3) _____

Solve the exponential equation. Round to three decimal places when necessary.

4) $250 - (1.78)^x = 0$

    A) 8.342

    B) 10.81

    C) 10.588

    D) 9.576

4) _____

5) $4^{x+2} = 8^x$

    A) 2.33

    B) 5.67

    C) 4

    D) –4

5) _____

Solve the logarithmic equation.

6) $\log_6 x = -5$

    A) 15,625

    B) $\dfrac{1}{7776}$

    C) 7776

    D) $\dfrac{1}{15,625}$

6) _____

7) $\log_8 x = 4$

    A) 4096

    B) 65,536

    C) 32

    D) 100,000,000

7) _____

8) ln x = 7 8) _____
   A) 10,000,000

   B) 7e

   C) ln 7

   D) e^7

9) ln(5x – 4) = ln 8 – ln (x – 2) 9) _____
   A) 2, $\dfrac{2}{5}$

   B) $\dfrac{14}{5}$

   C) 0, $\dfrac{14}{5}$

   D) ∅

10) log (x + 10) – log (x + 4) = log x 10) _____
    A) 2, –5

    B) 2

    C) No solution

    D) 6

11) $\log_5(x + 4) + \log_5(x - 4) = 2$

A) $\dfrac{82}{5}$

B) 41

C) $\sqrt{41}$

D) $\dfrac{25}{2}$

1) D
   Objective: (5.5) Solve Exponential Equation I
2) B
   Objective: (5.5) Solve Exponential Equation I
3) A
   Objective: (5.5) Solve Exponential Equation I
4) D
   Objective: (5.5) Solve Exponential Equation II
5) C
   Objective: (5.5) Solve Exponential Equation II
6) B
   Objective: (5.5) Solve Logarithmic Equation I
7) A
   Objective: (5.5) Solve Logarithmic Equation I
8) D
   Objective: (5.5) Solve Logarithmic Equation I
9) B
   Objective: (5.5) Solve Logarithmic Equation II
10) B
   Objective: (5.5) Solve Logarithmic Equation II
11) C
   Objective: (5.5) Solve Logarithmic Equation II