

# Unit 3-Mid-Unit Assessment-Review

Solve the equation. Round your answers to two decimal places when appropriate.

1.  $-8 + \sqrt{5x - 5} = -3$

x= \_\_\_\_\_

2.  $\sqrt{3x} = \sqrt{4x - 1}$

x= \_\_\_\_\_

3.  $\sqrt{x + 3} - 1 = 7$

x= \_\_\_\_\_

4.  $2\sqrt[3]{5x + 1} - 2 = 10$

x= \_\_\_\_\_

5.  $\sqrt[3]{(x + 1)^4} - 13 = 3$

x= \_\_\_\_\_

6.  $(x + 3)^4 - 11 = 70$

x= \_\_\_\_\_

7.  $x - 3 = \sqrt{11x + 47}$

x= \_\_\_\_\_

8.  $\frac{7}{3x^2 - 6x} + \frac{x^2}{x^2 - 4x + 4}$

x= \_\_\_\_\_

9.  $\frac{x}{x+5} - \frac{2}{x-3}$

x= \_\_\_\_\_

10.  $\frac{2x^2 + 7x - 15}{4x^2 - 8x + 3} \cdot \frac{2x^2 + x - 1}{x^2 + 6x + 5}$

x= \_\_\_\_\_

11.  $\frac{3x^2 + 4x + 1}{2x^2 + 7x + 6} \div \frac{x^2 - 2x - 3}{-5x^2 - 35x - 50}$

x= \_\_\_\_\_

Write each expression in radical/exponential form. Simplify if possible

12.  $7^{\frac{2}{3}}$  \_\_\_\_\_

13.  $(\sqrt[3]{5})^8$  \_\_\_\_\_

14.  $(3x)^{-\frac{3}{7}}$  \_\_\_\_\_

15.  $(\sqrt[7]{x})^6$  \_\_\_\_\_

16.  $6^{\frac{2}{3}} \cdot 6^{\frac{1}{3}}$  \_\_\_\_\_

17.  $(x^{\frac{1}{5}} \cdot x^{\frac{7}{3}})^8$  \_\_\_\_\_

18.  $\frac{1}{(\sqrt{4x})^7}$  \_\_\_\_\_

