

East Los Angeles College
Department of Mathematics
Math 125
Practice Test 3

Show all work for credit.

What is your name? Write your answer here.

Evaluate the following rational exponents.

1. $36^{\frac{1}{2}}$

2. $64^{\frac{1}{3}}$

3. $16^{\frac{3}{2}}$

4. $8^{-\frac{2}{3}}$

5. $(-27)^{\frac{4}{3}}$

6. $25^{-\frac{1}{2}}$

Use properties of exponents to write as positive powers.

7. $x^{\frac{2}{4}} \cdot x^{\frac{3}{4}}$

8. $x^{-\frac{1}{2}} \cdot x^{\frac{1}{4}}$

9. $\frac{x^{\frac{3}{4}}}{x^{-\frac{1}{2}}}$

10. $(x^{-4/5})^{1/4}$

Solve the following equations for x.

11. $\sqrt{x-2} = 5$

12. $\sqrt{x+4} = -8$

13. $3\sqrt{x+7} - 6 = 12$

14. $\sqrt{2x-8} = \sqrt{x+4}$

Solve the following equations for x using the square root formula.

15. $x^2 - 9 = 27$

16. $x^2 + 4 = 14$

17. $4x^2 - 7 = 17$

18. $2x^2 + 8 = -8$

Solve the following equations by using the quadratic formula.

19. $x^2 - 3x + 9 = 0$

20. $3x^2 + 4x - 2 = 0$

Solve the following equations by completing the square.

21. $x^2 + 6x - 5 = 0$

22. $x^2 - 4x + 6 = 0$

Answer Sheet

1		12	
2		13	
3		14	
4		15	
5		16	
6		17	
7		18	
8		19	
9		20	
10		21	
11		22	