Solve for x. Express irrational solutions rounded to the nearest hundredth. Show your work neatly organized.

1.
$$4^{(x-3)} = 32$$

$$2. 25^{(3x+1)} = 125$$

3.
$$2^{(x+2)} = 20$$

4.
$$3^{(2x-1)} = 75$$

5.
$$\log_3 x = 2$$

6.
$$\log_5 x = -2$$

7.
$$\text{Log}_{9} x = 1.5$$

8.
$$\text{Log}_{16} x = -0.75$$

9.
$$\text{Log}_2 x = 2.75$$

10.
$$\text{Log } x = 1.82$$

Algebra II Worksheet 5 Unit 11 page 2

Algebra II Worksheet 3 Unit 11 page 2	
11. \$1000 is invested in an account that pays interest at an annual rate of 6% compounded monthly. How long will it take for the value of the account to double? Express your answrounded to the nearest tenth of a year.)	
12. \$700 is invested in an account that nave interest at an annual rate of 49/ acmnounded.	doily
12. \$700 is invested in an account that pays interest at an annual rate of 4% compounded of the long will it take for the value of the account to double? Express your answer rounded the nearest tenth of a year.)	-
13. \$600 is invested in an account that pays interest at an annual rate of 7% compounded continuously. How long will it take for the value of the account to double? Express your answer rounded to the nearest tenth of a year.)	

Algebra II Worksheet #5 Unit 11 page 3

Algebra 11 Worksheet #5 Unit 11 page 5
14. \$800 is invested in an account that pays interest at an annual rate of 5% compounded monthly. How long will it take for the value of the account to reach \$2000? Express your answer rounded to the nearest tenth of a year.)
15. \$600 is invested in an account that pays interest at an annual rate of 7% compounded
quarterly. How long will it take for the value of the account to reach \$2000? Express your answer rounded to the nearest tenth of a year.)
16. \$1000 is invested in an account that pays interest at an annual rate of 2.5% compounded continuously. How long will it take for the value of the account to reach \$2500? Express your answer rounded to the nearest tenth of a year.

Algebra II Worksheet #5 Unit 11 page 4

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17. Money is invested in an account that pays interest at an annual rate of 6% compounded monthly. How long will it take for the value of the account to double? Express your answer rounded to the nearest tenth of a year.)
18. Money is invested in an account that pays interest at an annual rate of 4% compounded daily. How long will it take for the value of the account to double? Express your answer rounded to the nearest tenth of a year.)
19. Money is invested in an account that pays interest at an annual rate of 5% compounded continuously. How long will it take for the value of the account to double? Express your answer rounded to the nearest tenth of a year.)
20. \$600 is invested in an account that pays interest at an annual rate of 7% compounded continuously. How long will it take for the value of the account to reach \$2000? Express your answer rounded to the nearest tenth of a year.)