Name _____   Test Date _____ Parent Signature_____

Unit 6 Decimal, Algebra, Patterns Study Guide

Write an equivalent fraction for the following decimals.

1) 0.75 _____   2) 0.12 _____   3) 0.06 _____   4) 3.97 _____

Round the following decimals to the nearest whole number

5) 4.55 _____   6) 1.09 _____   7) 87.099 _____   8) 2.91 _____

Write an equivalent decimal for each.

9) 0.80 _____   10) 0.40 _____   11) $\frac{1}{10}$ _____   12) $\frac{21}{100}$ _____

Order the following from least to greatest.
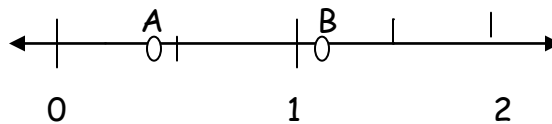
13)   17.3, 17.003, 17. 31, 17.02 _____

Order the following from greatest to least.

14)   14.68, 14.86, 14.88, 14.809 , 14.801 _____

Write the following decimals in expanded form.

15)   0.33   _____   16)   0. 84   _____

17)   1.27 _____   18)   0.52 _____

19) Circle the approximate location of point A on the number line…   0.1   0.4   0.5

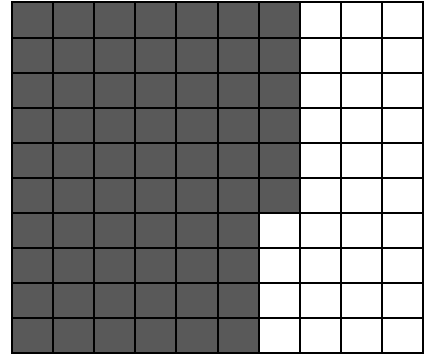20) Circle the approximate location of point B on the number line…   0.5   0.9   1.1

Complete the following with an equivalent fraction.

21) $\dfrac{}{10} = \dfrac{40}{100}$

22) $\dfrac{1}{10} = \dfrac{}{100}$

23) $\dfrac{4}{} = \dfrac{40}{100}$

24) Write a fraction and decimal for the following shaded region that is represented. _____

Solve then write your answer as a fraction and as a decimal.

25) $1 + \dfrac{7}{10} + \dfrac{10}{100} =$ _____

26) $\dfrac{4}{10} + \dfrac{9}{100} =$ _____

Write the answers to #25 and #26 in word form.

27) (#25) _____

28) (#26) _____

Compare the following using <, >, or =. <u>Verify your answer by drawing a model.</u>

29) $\dfrac{1}{100}$ _____ $\dfrac{1}{10}$

30) $\dfrac{6}{10}$ _____ $\dfrac{60}{1000}$

31) $\dfrac{71}{100}$ _____ $\dfrac{70}{100}$

32) The numbers below follow a pattern.   Write the next two numbers.

109, 98, 87, 76, _____, _____   What is the rule? _____

33) Choose a rule to describe the following pattern   12, 24, 48, 96

   a. add 12   b. subtract 12   c. multiply by 1/2   d. multiply by 2

34) Complete the input/output table below and write the rule for the table as an equation.

Rule: _____

Input	Output
144	24
54	9
114	
	37

35) The following table shows the relationship between the hours Jill baby sat and the amount of money she earned.

   a) How many hours did she work when she earned $220? _____

   b) How much money will she earn if she worked 30 hours? _____

   c) How many hours did she work when she earned $560? _____

   d) What is the rule   _____

      Write the rule as an equation. _____

# of hours worked	Money earned
10	$100
12	$120
	$220
30	
	$560

36) Complete the sequence of numbers that could be part a pattern that follows the rule stated below.

Rule: Multiply 2, then add 1   **3** , _____ , _____ , _____

37) Which of the following dollar amount is not equal to $17 when rounded to the nearest dollar?

    a. $ 16.55   b. $ 17.49   c. $ 16.49   d. $ 17. 51

38) Solve:

    a. $5\dfrac{1}{8} - 2\dfrac{3}{8} =$ b. $8 \times \dfrac{5}{7} =$

39) $4,905 \div 6 =$ 40) Multiply to check #38

41)   342
      $\underline{\times\ 25}$

42) Estimate then add: $37 + 392 + 12,989 =$