

Name _____ Test Date Fri, 2/19/16 Parent Signature _____

Treat this like the test.

Unit 6- Decimals, Fractions, Algebra, Patterns Study Guide

Write an equivalent fraction for the following decimals.

1) 0.75 $\frac{75}{100}$

2) 0.12 $\frac{12}{100}$

3) 0.06 $\frac{6}{100}$

4) 3.97 $3\frac{97}{100}$

Round the following decimals to the nearest whole number

5) 4.55 5

6) 1.09 1

7) 87.099 87

8) 2.91 3

Write an equivalent decimal for each.

9) 0.80 0.8

10) 0.40 0.4

11) $\frac{1}{10}$ 0.1

12) $\frac{21}{100}$ 0.21

Order the following from least to greatest.

13) 17.3, 17.003, 17.31, 17.02 17.003, 17.02, 17.3, 17.31

Order the following from greatest to least.

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

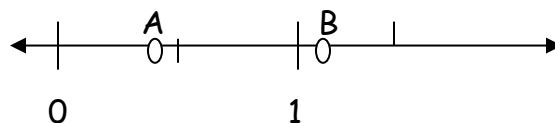
Write the following decimals in expanded form.

15) 0.33 $0.3 + 0.03$

16) 0.84 $0.8 + 0.04$

17) 1.27 $1 + 0.2 + 0.07$

18) 0.52 $0.5 + 0.02$



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

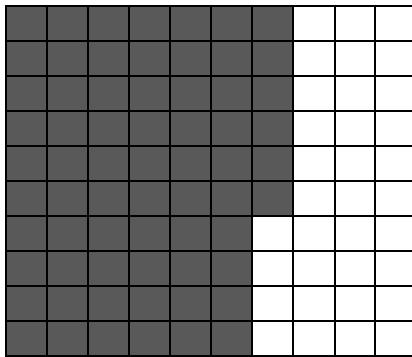
Complete the following with an equivalent fraction.

21) $\frac{4}{10} = \frac{40}{100}$

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

23) $\frac{4}{10} = \frac{40}{100}$

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



$\frac{66}{100}$ and .66

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

25) $1 + \frac{7}{10} + \frac{10}{100} = 1\frac{80}{100}$ or $1\frac{80}{100}$ and 1.8

26) $\frac{4}{10} + \frac{9}{100} = \frac{49}{100}$ and 0.49

$\frac{100}{100} + \frac{70}{100} + \frac{10}{100} = \frac{180}{100} = 1\frac{80}{100}$

$\frac{40}{100} + \frac{9}{100} = \frac{49}{100}$

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

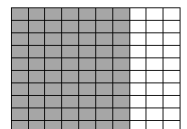
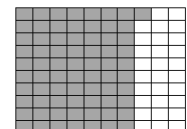
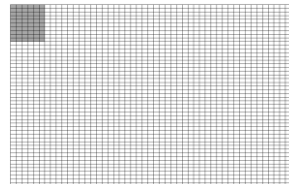
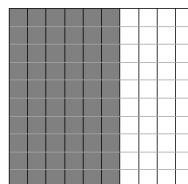
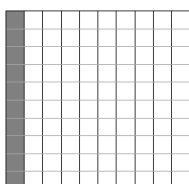
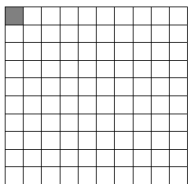
27) (#25) one and eight tenths 28) (#26) forty- nine hundredths

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

29) $\frac{1}{100} < \frac{1}{10}$

30) $\frac{6}{10} > \frac{60}{1000}$

31) $\frac{71}{100} > \frac{70}{100}$



$\frac{1}{100}$ vs $\frac{10}{100}$

$\frac{1}{100}$ vs $\frac{1}{10} \times \frac{10}{10} = \frac{10}{100}$

$\frac{600}{1000}$ vs $\frac{60}{1000}$

$\frac{6}{10} \times \frac{100}{100} = \frac{600}{1000}$

↑ This is only 60 out of 250... use your imagination... you can clearly see that $\frac{6}{10}$ is bigger than $\frac{60}{1000}$

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

109, 98, 87, 76, 65, 54

What is the rule? subtract 11 or a - 11

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: $I \div 6 = O$

Input	Output
144	24
54	9
114	19
222	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? 22 hours

b) How much money will she earn if she worked 30 hours? \$300

c) How many hours did she work when she earned \$560? 56 hours

d) What is the rule Multiply by \$10

Write the rule as an equation. $H \times \$10 = M$

# of hours worked	Money earned
10	\$100
12	\$120
22	\$220
30	\$300
56	\$560

Don't forget the units !!

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 , 7 , 15 , 31

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. \$ 16.59

d. \$ 17.51

38) Solve:

$$\text{a. } 5\frac{1}{8} - 2\frac{3}{8} = \frac{41}{8} - \frac{19}{8} = \frac{22}{8} \\ = 2\frac{6}{8} = 2\frac{3}{4}$$

$$\text{b. } 8 \times \frac{5}{7} = \frac{8}{1} \times \frac{5}{7} = \frac{40}{7} \\ = 5\frac{5}{7}$$

39) $4,905 \div 6 = 817 \text{ r } 3$

40) Multiply to check #39

$$\begin{array}{r} 817 \\ \times 6 \\ \hline 4,902 \\ + 3 \\ \hline 4,905 \end{array}$$

$$\begin{array}{r} 2 1 \\ 41) 342 \\ \underline{ 0} 25 \\ 171 0 \\ + 684 \\ \hline 8,550 \end{array}$$

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

$$\begin{array}{r} 40 \\ 400 \\ + 13000 \\ \hline 13440 \end{array}$$