4th Grade Unit 5: Fractions & Decimals (Form A)

Name _____   **Date** _____

Standard:

30.NF.5 express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100 (e.g., express 3/10 as 30/100 and add 3/10 + 4/100 = 34/100) *Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But, addition and subtraction with unlike denominators in general is not a requirement at this grade.*

31.NF.6 use decimal notation for fractions with denominators 10 or 100 (e.g., rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram)

32.NF.7 compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model

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1. Complete the equation with an equivalent fraction.

$$\frac{6}{10} = \frac{}{100}$$

2. Write a decimal that is equivalent to $\frac{19}{100}$: _____

Write the decimal in word form:

_____

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3. Show $\frac{25}{100}$

a. in expanded form: $\frac{}{10} + \frac{}{100}$

b. as an equivalent decimal:_____

c. on a place value chart:

Tens	Ones	.	Tenths	Hundredths

4. Which of the following is NOT equal to ½?

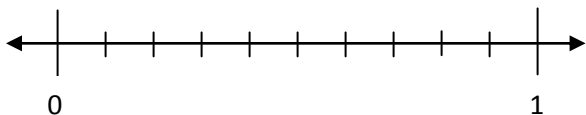a. 0.5

b. 1.2

c. $\frac{5}{10}$

d. 0.50

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5. Plot the following decimals on the number line below:
   a. 0.75   b. 0.9   c. 0.15   d. 0.4

0   1

6. Sam answered two-tenths of the questions on his Science quiz *incorrectly*. What fraction of the questions did he answer **correctly**? Write your answer as a **fraction** and a **decimal** equivalent.
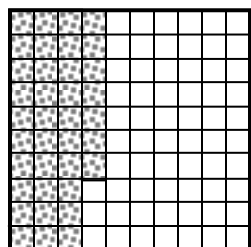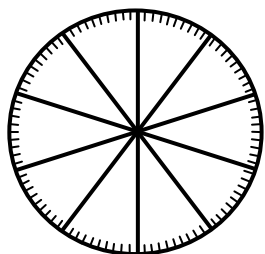
_____ = _____

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7. Write the fraction and the decimal represented by the base ten model below when the base ten flat equals 1 whole.
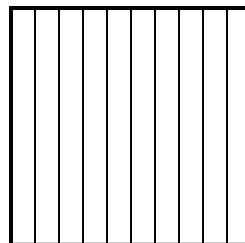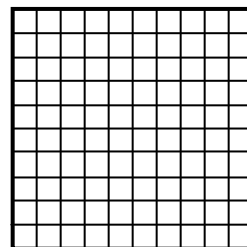
_____ = _____

Shade the decimal circle to match the base ten model:

8. Shade the region of each grid to model $\frac{6}{10}$. Write the decimal equivalent for each model.
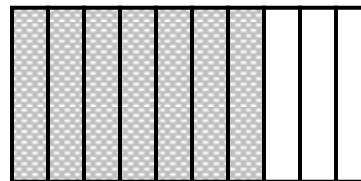
Decimal _____

Decimal _____

9. The expression below is the expanded form for which fraction?

$$\frac{7}{10} + \frac{4}{100}$$

a. $\frac{11}{10}$ c. $\frac{11}{100}$

b. $\frac{74}{10}$ d. $\frac{74}{100}$

10. The fraction strips show $\frac{7}{10}$.

Which is an equivalent decimal?

A. 7.10

B. 0.710

C. 0.70

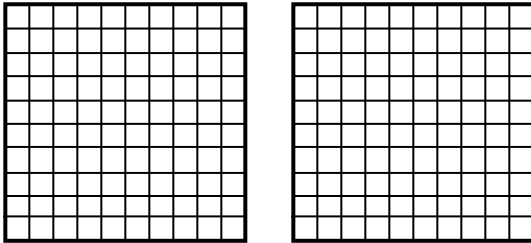D. 0.07

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11. Which symbol (<, >, =) makes this sentence true?

    0.63 _____ 0.9

    Shade the diagram to prove your answer.

12. Which sentence is **NOT** true?

    a. 0.24 < 0.9
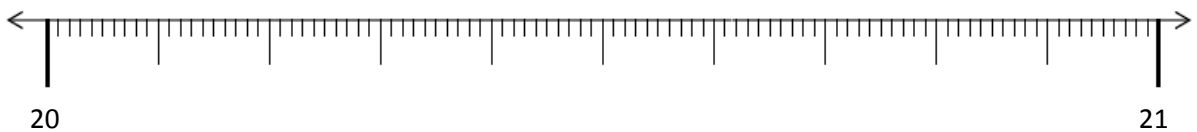
    b. 4.5 > 0.45

    c. 7.30 < 7.9

    d. 4.7 < 4.33

13. Medo, K.C., and Wyatt are running backs for the Mountain View Bears. In the last game Medo ran 20.46 yards, K.C. ran 20.13 yards, and Wyatt ran 20.7 yards. Write the players in order from the player who ran the **least** amount to the player who ran the **greatest**:

    _____   _____   _____

    Prove your answer by plotting the decimals on the number line below.

    20   21

14. Bria used a calculator to solve a money problem. She reasoned that the answer $4.5 was less than $4.18 because 5 pennies are less than 18 pennies. Is Bria correct? _____ Explain how you know:

    _____
    _____
    _____

15. Javon ran 3.4 kilometers. Keith ran 3 and 4 tenths of a mile. Did both boys run the same distance? _____ Explain how you know:

    _____
    _____
    _____
    _____
    _____

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Answer Key

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1. $$\frac{6}{10} = \frac{60}{100}$$

2. _0.19_

   zero and nineteen hundredths ("zero" is optional)

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3. $$\frac{2}{10} + \frac{5}{100}$$ _0.25_

Tens	Ones	.	Tenths	Hundredths
	0	.	2	5

4. (b.) 1.2

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5. a. 0.75   b. 0.9   c. 0.15   d. 0.4

0   1
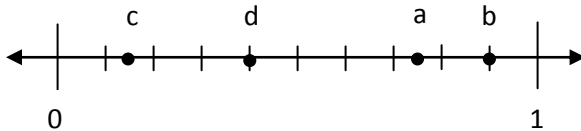
6. $$\frac{8}{10} = 0.8 \text{ or } .8$$

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7. $$\frac{37}{100} = \underline{0.37 \text{ or } .37}$$

8.

Decimal __0.6__

Decimal __0.60__

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9. a. $\frac{11}{10}$ c. $\frac{11}{100}$

   b. $\frac{74}{10}$ (d.) $\frac{74}{100}$

10.   a.   7.10

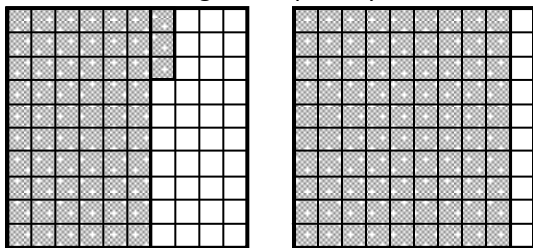   b.   0.710

   (c.)   0.70

   d.   0.07

Name _____   **Date** _____

11. Which symbol (<, >, =) makes this sentence true?

$$0.63 \ \underline{<} \ 0.9$$

Shade the diagram to prove your answer.

12. Which sentence is **NOT** true?
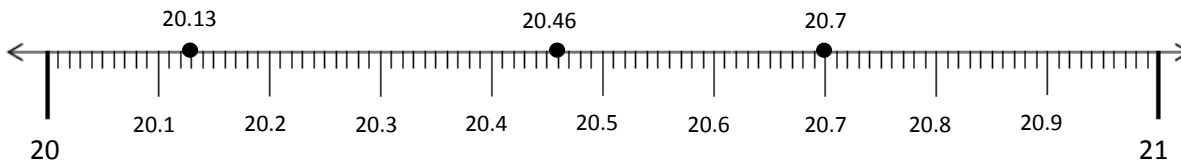
   a.   0.24 < 0.9

   b. 4.5 > 0.45

   c.   7.30 < 7.9

   (d.)   4.7 < 4.33

13. Medo, K.C., and Wyatt are running backs for the Mountain View Bears. In the last game Medo ran 20.46 yards, K.C. ran 20.13 yards, and Wyatt ran 20.7 yards. Write the players in order from the player who ran the **least** amount to the player who ran the **greatest**:

   _K.C._   _Medo_   _Wyatt_

   Prove your answer by plotting the decimals on the number line below.

14. Bria reasons that $4.5 is less than $4.18 because 5 pennies are less than 18 pennies. Is she correct? _no_ Explain how you know:

   Answers will vary but should include the idea that $4.5 is the same as $4 and 5 dimes or $4.50, and 5 dimes are more than 18 pennies, so 4.5 is more than 4.18. Students could also explain that 5 in the tenths place is more than 1 in the tenths place.

15. Javon ran 3.4 kilometers. Keith ran 3 and 4 tenths of a mile. Did both boys run the same distance? _no_ Explain how you know:

   Answers will vary but should include the idea that both boys ran 3.4, but Javon ran kilometers and Keith ran miles. Kilometers and miles are not the same, so the boys did not run the same distance.