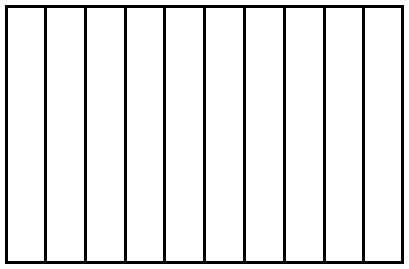
**Mid-Module 6 Study Guide (2)**
**Lessons 1-8 Review**

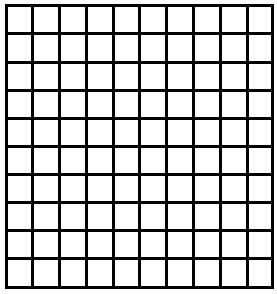
Name_____ Date_____

1. Write the following fractions as equivalent decimals. Then, model each decimal with the given representation.

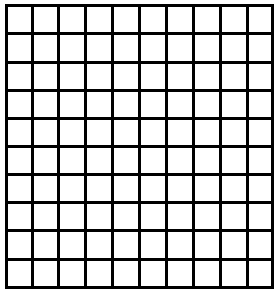
a. $\frac{3}{10}$ = _____



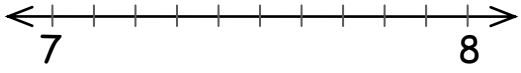
b. $\frac{4}{100}$ = _____



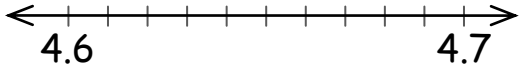
d. $\frac{36}{100}$ = _____



e. $7\frac{6}{10}$ = _____




f. $4\frac{68}{100}$ = _____




g. $3\frac{4}{10}$ = _____

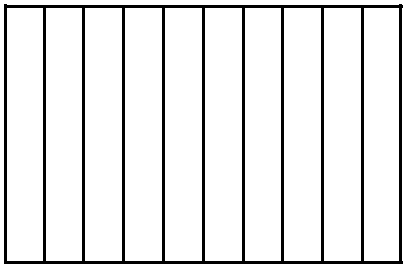
| Ones + | Tenths |
|---|---|
| | |

h. $5\frac{36}{100}$ = _____

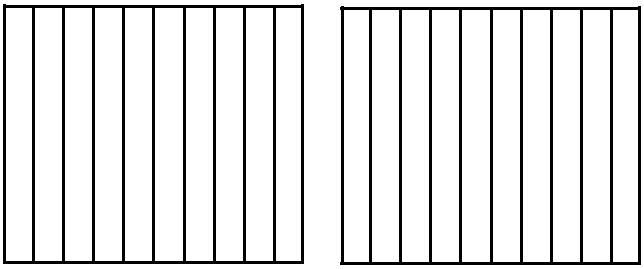
| Ones + | Tenths | Hundredths |
|---|---|---|
| | | |

2. Decompose tenths into hundredths using the area model. Express the equivalence of tenths and hundredths with fractions and with decimals.

a. 6 tenths



b. 1 and 3 tenths



3. Use number bonds to complete Parts (a) and (b) below:

a. Decompose 2.34 by units.

b. Compose 0.02, 0.3, and 1 as one decimal number.

4. Model the following equivalence on the place value chart using number disks.

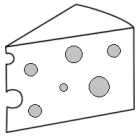
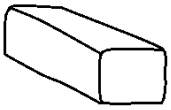
20 hundredths = 2 tenths

| Ones + | Tenths | Hundredths |
|---|---|---|
| | | |

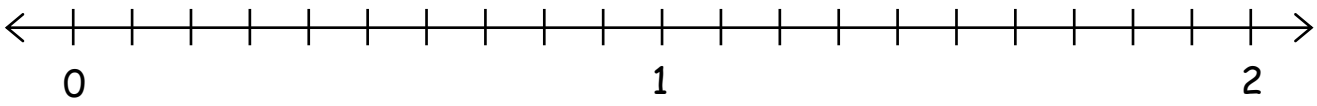
5. Complete the following chart.

| | Unit Form | Fraction | Fraction Expanded Form | Decimal Expanded Form | Decimal |
|---|---|---|---|---|---|
| a. | 1 tenths<br>5 hundredths | | | | |
| b. | | $2\ \frac{3}{10}$ | | | |
| c. | | | | | 7.45 |
| d. | | | | $(2 \times 10) + (3 \times 1) + (4 \times 0.01)$ | |
| e. | | | $(1 \times 10) + (3 \times 1) + (6 \times \frac{1}{10}) + (5 \times \frac{1}{100})$ | | |

6. Mika puts groceries into bags. The items and their weights in kilograms are given below.

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| Bread | Milk | Cheese | Butter | Apples | Eggs |
| 0.25 | 1.5 | 0.55 | $\frac{15}{100}$ | $\frac{70}{100}$ | $\frac{35}{100}$ |

a. Plot the weight of each item on the number line below.




b. Write a number sentence using decimals to record the weight of the milk in expanded form.

c. Write a number sentence using fractions to record the weight of the butter in expanded form.

Mika packs the eggs and cheese into one of the bags. Together, these items weigh 0.9 kilogram.

d. Use the area model to show that 0.9 can be renamed as hundredths.

e. Use division to show how 0.9 can be renamed as hundredths.

Mika places the bread into the bag with the eggs and cheese. Together, all three items weigh 1 and 15 hundredths kilograms.

f. Use a model and words to explain how 1 and 15 hundredths can be written as a decimal and as a fraction.

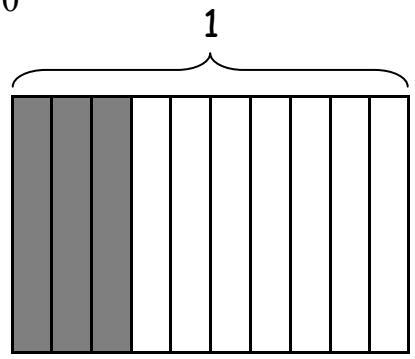
Mika put the rest of the groceries in a second bag. The items in both bags weigh a total of $3\frac{50}{100}$ kilograms.

g. Using a model and words, explain how many tenths are in $3\frac{50}{100}$.

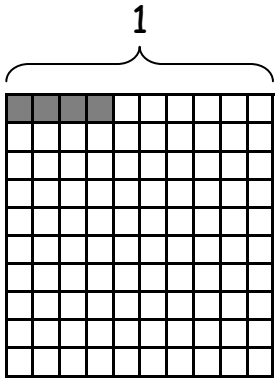
Name ANSWER KEY! Date _____

1. Write the following fractions as equivalent decimals. Then, model each decimal with the given representation.

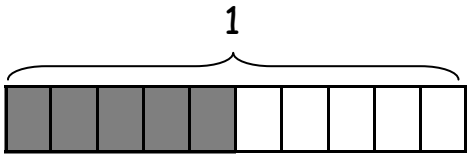
a. $\frac{3}{10}$ = 0.3



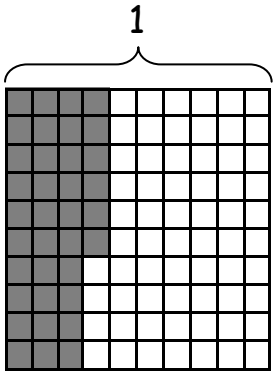

b. $\frac{4}{100}$ = 0.04



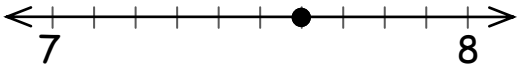

c. $\frac{5}{10}$ = 0.5



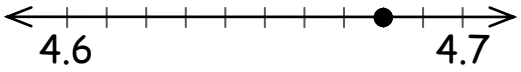

d. $\frac{36}{100}$ = 0.36




e. $7\frac{6}{10}$ = 7.6




f. $4\frac{68}{100}$ = 4.68




g. $3\frac{4}{10}$ = 3.4

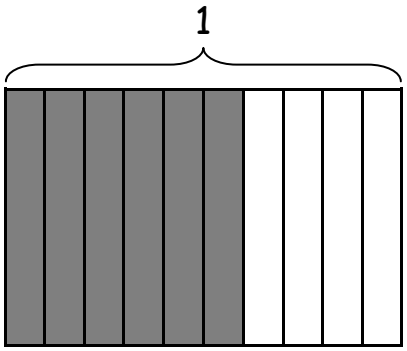
| Ones | + | Tenths |
|---|---|---|
| 3 | | 4 |

h. $5\frac{36}{100}$ = 5.36

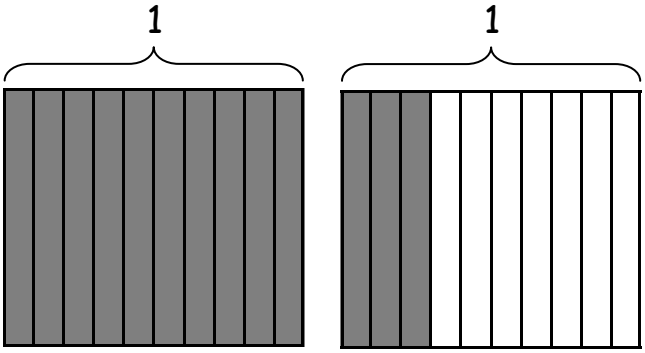
| Ones | + | Tenths | Hundredths |
|---|---|---|---|
| 5 | | 3 | 6 |

2. Decompose tenths into hundredths using the area model. Express the equivalence of tenths and hundredths with fractions and with decimals.

a. 6 tenths

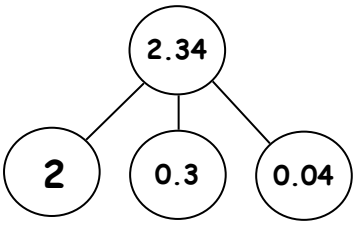



b. 1 and 3 tenths




3. Use number bonds to complete Parts (a) and (b) below:

a. Decompose 2.34 by units.




b. Compose 0.02, 0.3, and 1 as one decimal number.

**1.32**

4. Model the following equivalence on the place value chart using number disks.

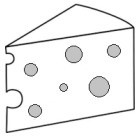
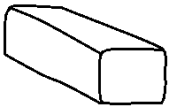
20 hundredths = 2 tenths

| Ones + | Tenths | Hundredths |
|---|---|---|
| | .1 .1 | .01 .01 .01 .01<br>.01 .01 .01 .01<br>.01 .01 .01 .01<br>.01 .01 .01 .01<br>.01 .01 .01 .01 |

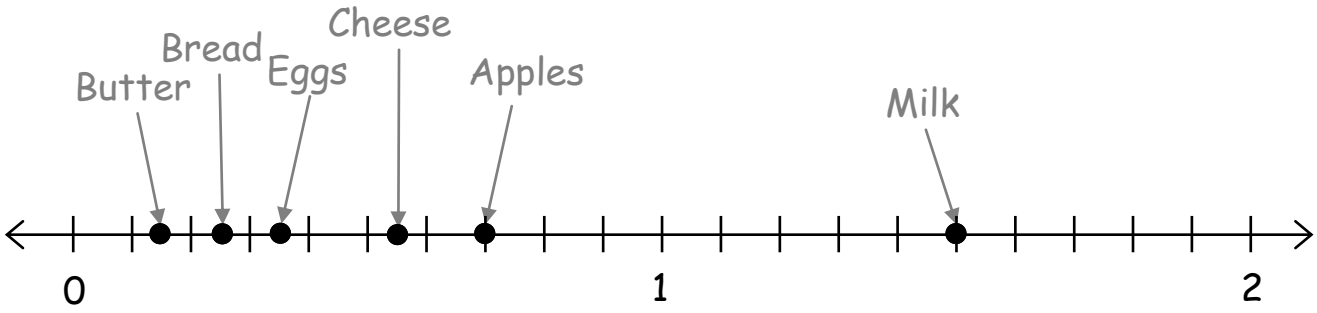
5. Complete the following chart.

| | Unit Form | Fraction | Fraction Expanded Form | Decimal Expanded Form | Decimal |
|---|---|---|---|---|---|
| a. | 1 tenths<br>5 hundredths | $\frac{15}{100}$ | $(1 \times \frac{1}{10}) + (5 \times \frac{1}{100})$ | (1 x 0.01) +<br>(5 x 0.01) | 0.15 |
| b. | 2 ones<br>3 tenths | $2\ \frac{3}{10}$ | $(2 \times 1) + (3 \times \frac{1}{10})$ | (2 x 1) + (3 x 0.1) | 2.3 |
| c. | 7 ones<br>4 tenths<br>5<br>hundredths | $7\ \frac{45}{100}$ | (7 × 1) +<br>$(4 \times \frac{1}{10}) + (5 \times \frac{1}{100})$ | (7 × 1) +(4 × 0.1) +<br>(5 × 0.01) | 7.45 |
| d. | 2 tens 3<br>ones<br>4 hun-<br>dredths | $23\ \frac{4}{100}$ | (2 × 10) + (3 × 1) +<br>$(4 \times \frac{1}{100})$ | (2 × 10) + (3 × 1) +<br>(4 × 0.01) | 23.04 |
| e. | 1 ten 3 ones<br>6 tenths<br>5<br>hundredths | $13\ \frac{65}{100}$ | (1 × 10) + (3 × 1) +<br>$(6 \times \frac{1}{10}) + (5 \times \frac{1}{100})$ | (1 × 10) + (3 × 1) +<br>(6 × 0.1) +<br>(5 × 0.01) | 13.65 |

6. Mika puts groceries into bags. The items and their weights in kilograms are given below.

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| Bread | Milk | Cheese | Butter | Apples | Eggs |
| 0.25 | 1.5 | 0.55 | $\frac{15}{100}$ | $\frac{70}{100}$ | $\frac{35}{100}$ |

a. Plot the weight of each item on the number line below.




b. Write a number sentence using decimals to record the weight of the milk in expanded form.

**1 + 0.5 = 1.5**

c. Write a number sentence using fractions to record the weight of the butter in expanded form.

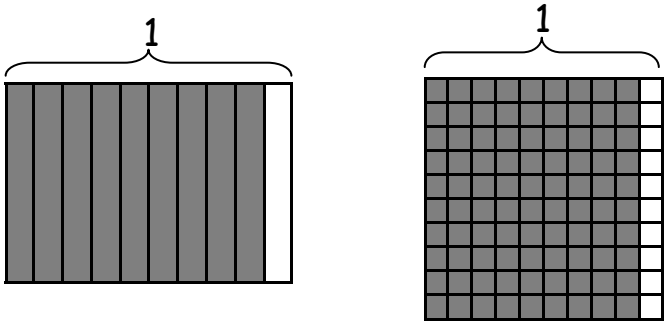
$\frac{05}{100} + \frac{10}{100} = \frac{15}{100}$ **(or)** $\frac{05}{100} + \frac{05}{100} + \frac{05}{100} = \frac{15}{100}$

**(or equivalent)**

Mika packs the eggs and cheese into one of the bags. Together, these items weigh 0.9 kilogram.

d. Use the area model to show that 0.9 can be renamed as hundredths.

**0.9 = 0.90**



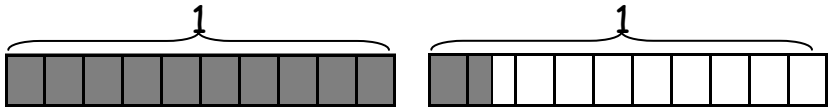

e. Use division to show how 0.9 can be renamed as hundredths.

$$0.9 = \frac{9}{10} = \frac{90}{100} \qquad \frac{90}{100} = \frac{90 \div 10}{100 \div 10} = \frac{9}{10}$$

Mika places the bread into the bag with the eggs and cheese. Together, all three items weigh 1 and 15 hundredths kilograms.

f. Use a model and words to explain how 1 and 15 hundredths can be written as a decimal and as a fraction.

**1 and 15 hundredths is equal to 1.15, as they represent the same amount.**




Mika put the rest of the groceries in a second bag. The items in both bags weigh a total of 3 $\frac{50}{100}$ kilograms.

g. Using a model and words, explain how many tenths are in 3 $\frac{50}{100}$.

**3 ones equals 30 tenths.**

**50 one hundredths equals 5 tenths.**

**30 plus 5 tenths equals 35tenths.**