

Module 4 - Lesson 7:

Round decimal numbers to the nearest one, tenths, or hundredth.

CCSS Standard – 5.NBT.A.4

FLUENCY (10-min)

Whiteboard Exchange: Add or Subtract Mixed Numbers



Look at the fractional units.
Do they have **LIKE** units?

No!
Are the units **related**?

Yes!
Which fraction can we
RENAME so the fractional
units, denominators, are
the same?

2/5

$$3\frac{3}{10} + 2\frac{2}{5} = \underline{\hspace{2cm}}$$

FLUENCY (10-min)

Whiteboard Exchange: Add or Subtract Mixed Numbers



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Do they have **LIKE** units?

No!
Are the units **related**?

Yes!
Which fraction can we
RENAME so the fractional
units, denominators, are
the same?

3/4

$$3\frac{5}{12} + 3\frac{3}{4} = \underline{\hspace{2cm}}$$

FLUENCY (10-min)

Whiteboard Exchange: Add or Subtract Mixed Numbers



Look at the fractional units.
Do they have **LIKE** units?

No!
Are the units **related**?

Yes!
Which fraction can we
RENAME so the fractional
units, denominators, are
the same?

3/4

$$5\frac{7}{8} - 2\frac{3}{4} = \underline{\hspace{2cm}}$$

FLUENCY (10-min)

Whiteboard Exchange: Add or Subtract Mixed Numbers



Look at the fractional units.
Do they have **LIKE** units?

No!
Are the units **related**?

Yes!
Which fraction can we
RENAME so the fractional
units, denominators, are
the same?

2/5

$$5\frac{2}{5} - 3\frac{10}{15} = \underline{\hspace{2cm}}$$

FLUENCY (10-min)

Counting on the Number Line by Hundredths

Use the number line to count forward by HUNDREDTHS to 0.1 (one tenth)

Use whole numbers and decimals numbers.

The first number you say is 0. Ready?

What number is HALFWAY
between 0 and 0.1?



What
number is
HALFWAY
between 0.1
and 0.2?

Let's continue counting
from 0.1 to 0.2 in
hundredths.



What
number is
HALFWAY
between 0.7
and 0.8?

Now let's count
from 0.7 to 0.8 in
hundredths.



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

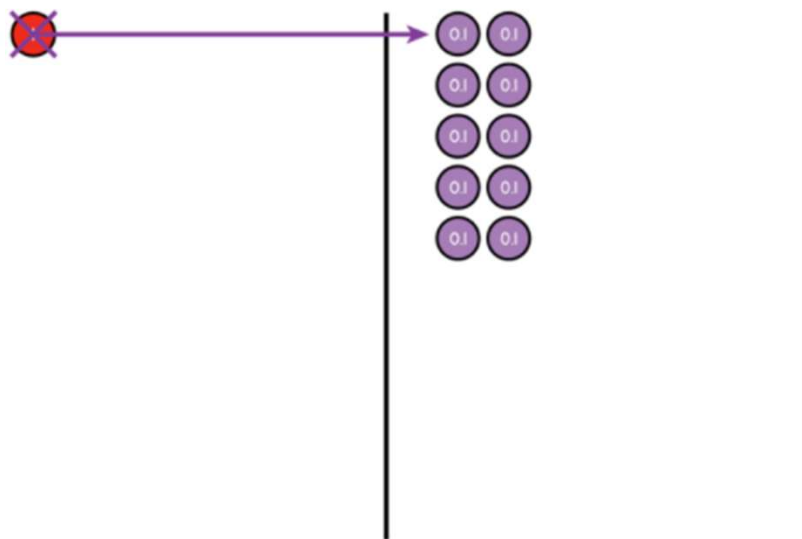
What **value** is represented on the chart?
Say the answer in **UNIT FORM**.

1 one

1 one is equal to how many ones, tenths and hundredths?

1 one is equal to how many tenths and hundredths?

$$\begin{array}{l} 1.00 = \underline{1} \text{ one } \underline{0} \text{ tenths } \underline{0} \text{ hundredths} \\ 1.00 = \underline{10} \text{ tenths } \underline{0} \text{ hundredths} \end{array}$$



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

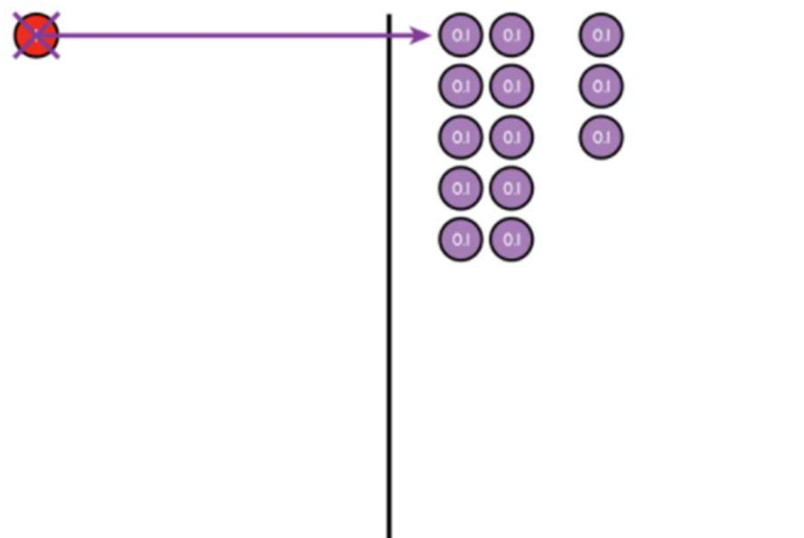
What **value** is represented on the chart?
Say the answer in **UNIT FORM**.

1 one AND 3 tenths

1.30 is equal to how many ones, tenths and hundredths?

1.30 is equal to how many tenths and hundredths?

$$\begin{array}{rcll} 1.30 & = & \underline{1} & \text{one} \quad \underline{3} \text{ tenths} \quad \underline{0} \text{ hundredths} \\ 1.30 & = & \underline{13} & \text{tenths} \quad \underline{0} \text{ hundredths} \end{array}$$



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.

Wait for my signal to say the answer.

What **value** is represented on the chart?

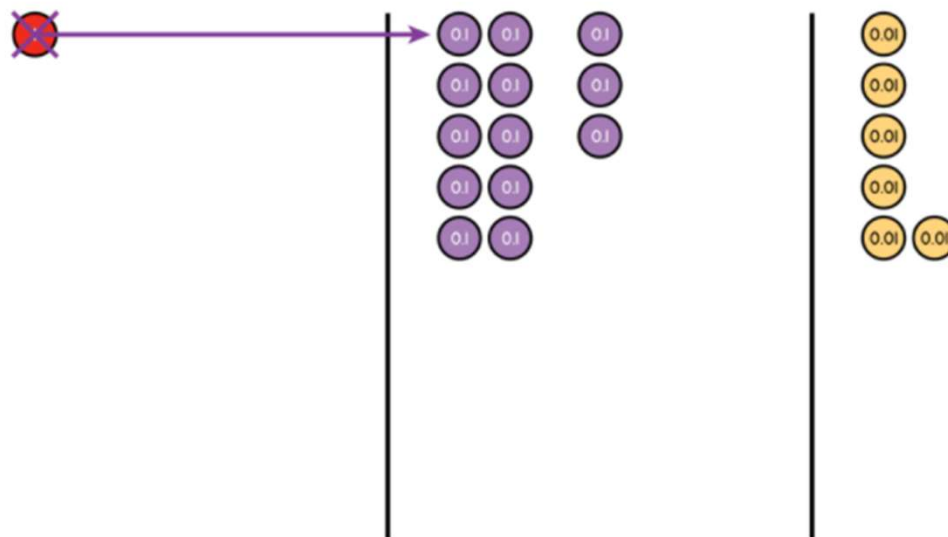
Say the answer in **UNIT FORM**.

1 one AND 3 tenths 6 hundredths

1.36 is equal to how many ones, tenths and hundredths?

1.36 is equal to how many tenths and hundredths?

$$1.36 = \underline{1} \text{ one } \underline{3} \text{ tenths } \underline{6} \text{ hundredths}$$
$$1.36 = \underline{13} \text{ tenths } \underline{6} \text{ hundredths}$$



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

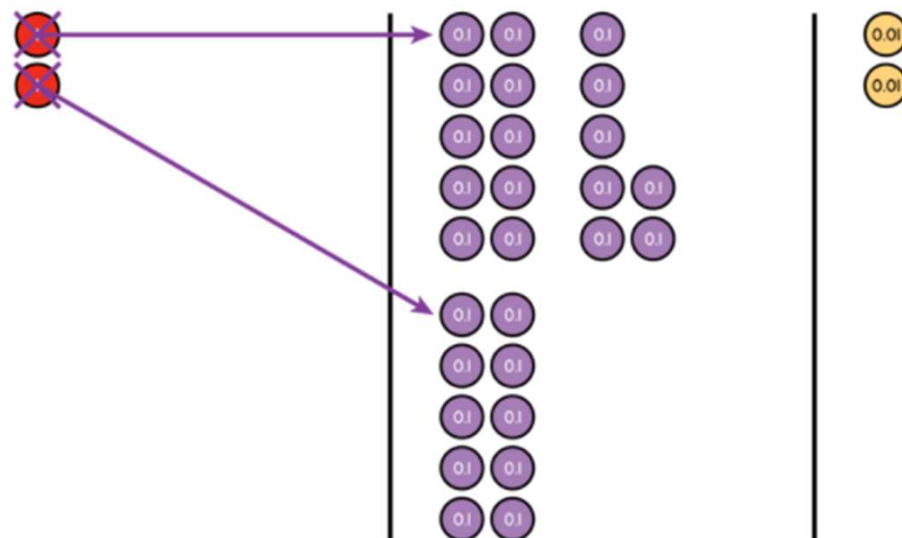
What **value** is represented on the chart?
Say the answer in **UNIT FORM**.

2 ones AND 7 tenths 2 hundredths

2.72 is equal to how many ones, tenths and hundredths?

2.72 is equal to how many tenths and hundredths?

$$2.72 = \underline{2} \text{ ones } \underline{7} \text{ tenths } \underline{2} \text{ hundredths}$$
$$2.72 = \underline{27} \text{ tenths } \underline{2} \text{ hundredths}$$



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

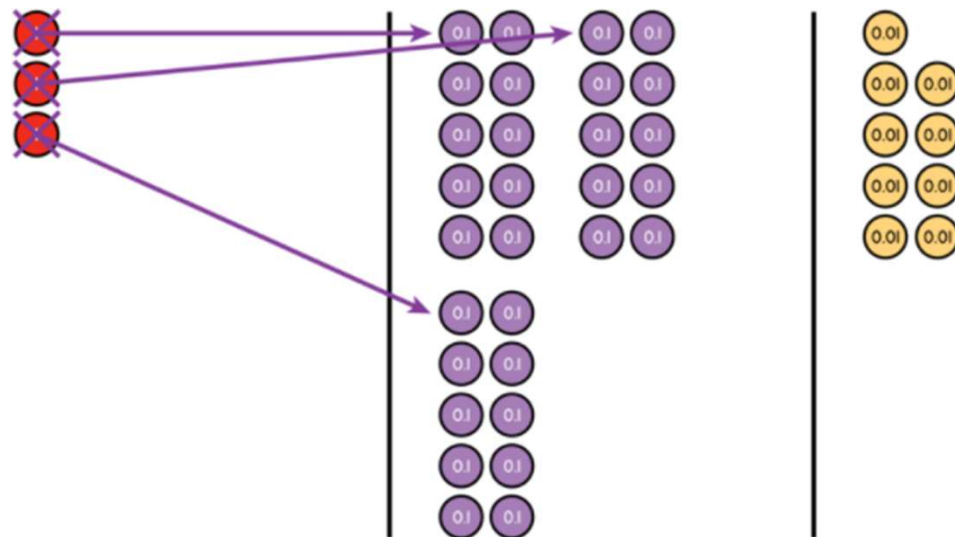
What **value** is represented on the chart?
Say the answer in **UNIT FORM**.

3 ones AND 9 hundredths

3.09 is equal to how many ones, tenths and hundredths?

3.09 is equal to how many tenths and hundredths?

$$\begin{array}{rcll} 3.09 = & \underline{3} & \text{ones} & \underline{0} \text{ tenths} & \underline{9} \text{ hundredths} \\ 3.09 = & \underline{30} & \text{tenths} & \underline{9} & \text{hundredths} \end{array}$$



FLUENCY (10-min)**Choral Response: Rename Place Value Units**

Raise your hand when you know the answer to each question.
Wait for my signal to say the answer.

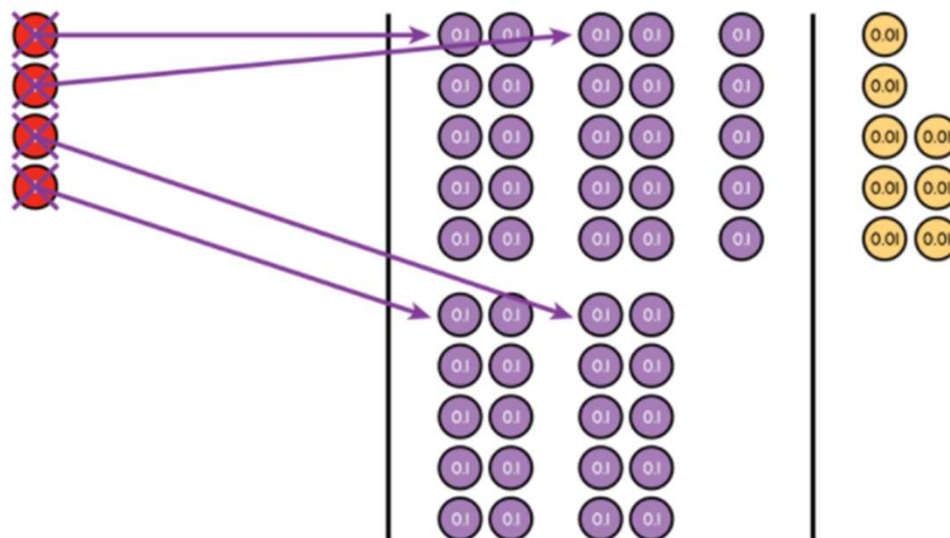
What **value** is represented on the chart?
Say the answer in **UNIT FORM**.

4 ones AND 5 tenths 8 hundredths

4.58 is equal to how many ones, tenths and hundredths?

4.58 is equal to how many tenths and hundredths?

$$4.58 = \underline{4} \text{ ones } \underline{5} \text{ tenths } \underline{8} \text{ hundredths}$$
$$4.58 = \underline{45} \text{ tenths } \underline{8} \text{ hundredths}$$



LAUNCH (5-min)

Consider the purpose of **rounding** decimal numbers in the real-world.

Adesh's sister used a stopwatch to see how long Adesh could do a handstand. He later told his friends that he did a handstand for **about 10 seconds**.

What do you notice? Wonder?



"about" ten seconds

"about" vs. "actual" time

Stop watches show tenths

Today, we will
round decimals
to the nearest
one, tenth, and
hundredth!

Suppose the stopwatch read 9.7 seconds. Why might Adesh claim he can hold a handstand for about 10 seconds rather than say 9.7 seconds?



LEARN (35-min)

Use the Halfway Point to Round

Digital Great
Minds interactive



We can use what we know about rounding WHOLE numbers to help us round decimal numbers to the nearest one.

How many ONES are in 8.6?

8 ones

What is one more than 8?

9 ones

Between which two ones is 8.6?

8 and 9

Just as with rounding whole numbers, we can use the number halfway between the two benchmark numbers to round decimals.

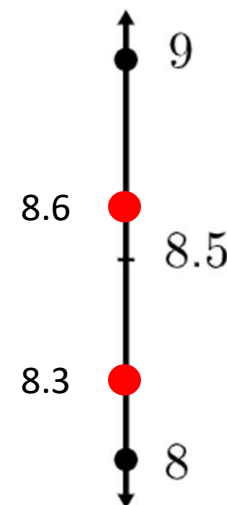
8.6

8.3

Where does my number go?

8.6

- 8.6 is closer to 9.
- 8.6 rounds UP to the nearest one; which is 9.



- 8.3 is closer to 8.
- 8.3 rounds DOWN to the nearest one; which is 8.

LEARN (35-min)

Use the Halfway Point to Round

Since 8.6 is closer to 9 than 8, 8.6 rounds up to the nearest one.

$$8.6 \approx 9$$

This symbol in math mean approximate or “about”. We use it when making a rounding statement.

8.6 is approximately 9.
8.6 is about 9.

Since 8.3 is closer to 8 than 9, 8.3 rounds down to the nearest one.

$$8.3 \approx 8$$

8.3 is approximately 8.
8.3 is about 8.

LEARN (35-min)

Use the Halfway Point to Round

LEARN book page 63.

NOTICE: This problem asks us to round to the nearest **TENTH**.

How do you say 12.72 in unit form by using only tenths and hundredths?

127 tenths 2 hundredths

How many tenths are in 12.72?

127 tenths

What is 1 more tenth than 127 tenths?

128 tenths

Between which two tenths in 12.72?

127 tenths and 128 tenths

1. Round 12.72 to the nearest tenth. Show your thinking on the number line.



$$12.72 \approx \underline{12.7}$$

What is the halfway point between 127 tenths and 128 tenths?

12.75

LEARN (35-min)

Use the Halfway Point to Round

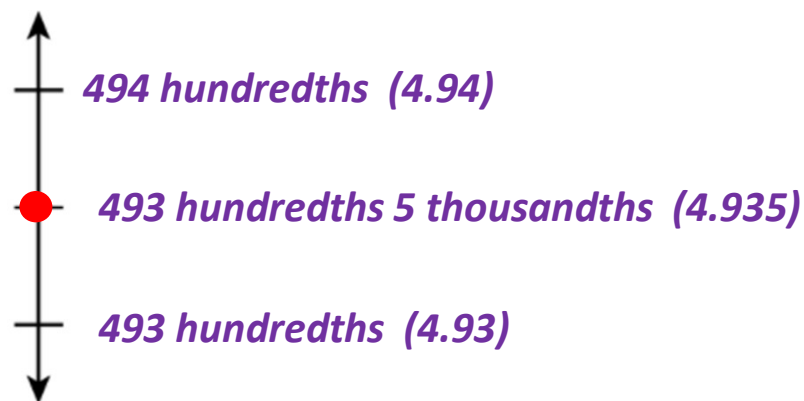
LEARN book page 63.

2. Round 4.935 to the nearest hundredth. Show your thinking on the number line.

How should we decide to label the beginning and ending tick marks on the number line?

What is the halfway point on the number line?

Which hundredth is it closer to?



$$4.935 \approx \underline{4.94}$$

Neither. It is **EXACTLY** at the halfway point between them.

RULE: When a decimal number is exactly halfway between the two benchmark numbers, we round UP to the greater number.

Please Notice This



LEARN (35-min)

Regroup to a New Unit

LEARN book page 64.

Sometimes when rounding, we must round to the next higher unit.

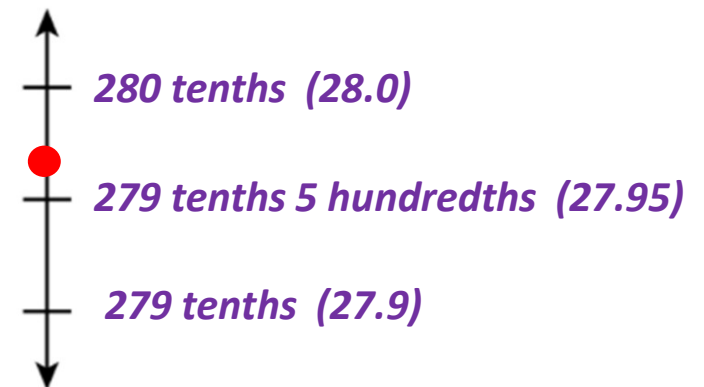
How should we decide to label the beginning and ending tick marks on the number line?

What is the halfway point on the number line?

Which tenth is 27.96 closer to?

27.96 is closer to 280 tenths.

3. Round 27.96 to the nearest tenth. Show your thinking on the number line.



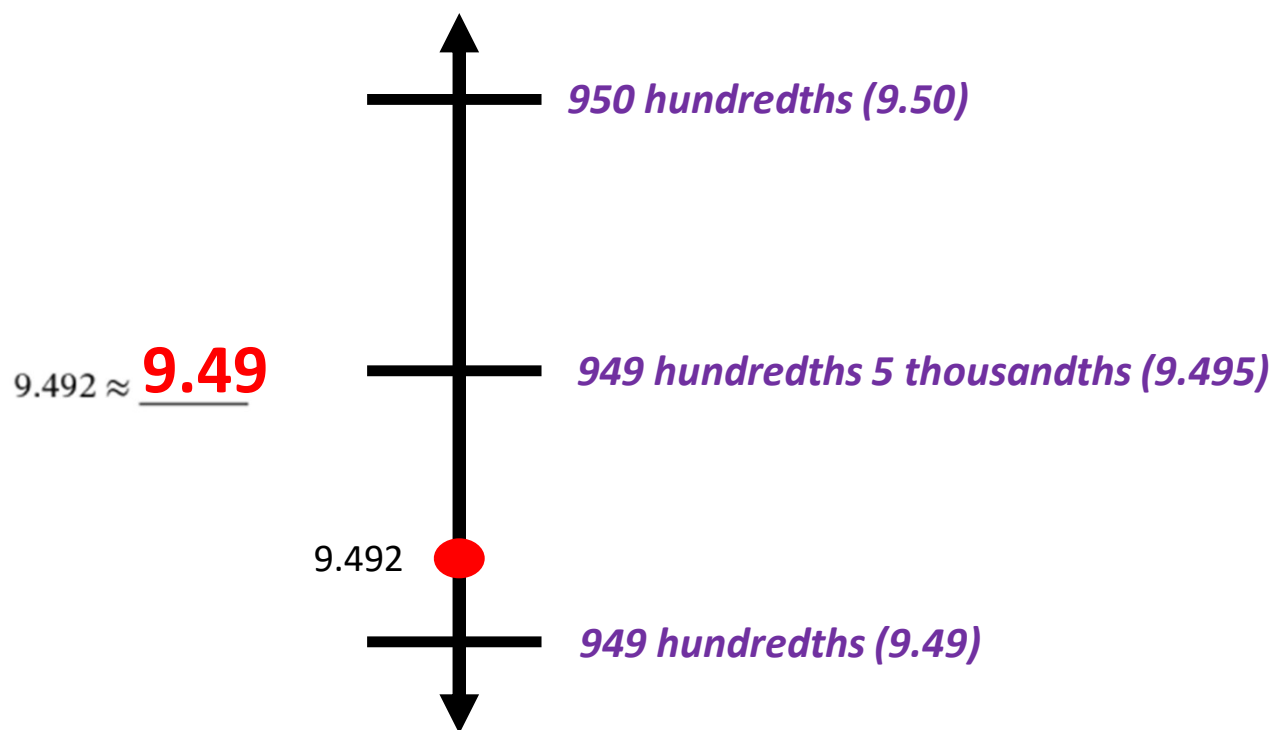
$$27.96 \approx \underline{28.0}$$

LEARN (35-min)

Regroup to a New Unit

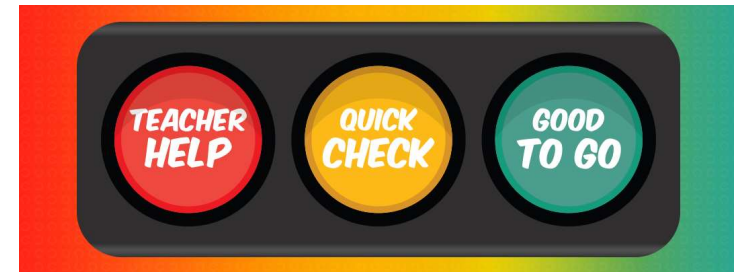
LEARN book page 64.

4. Round 9.492 to the nearest hundredth. Draw a number line to show your thinking.



LAND (10-min)

Exit Ticket







Exit Ticket – PAGE 69

Small Group Time:

Problem Set Pages 65 – 68

Homework:

Page 45 APPLY BOOK

Name _____		Date _____			7
Round each number to the given place value. Show your thinking on the number line.					
1. Nearest one		2. Nearest tenth			
					
2.4 \approx _____		0.38 \approx _____			
3. Nearest hundredth					
					
2.169 \approx _____					