Distance Learning Fourth Grade Week 3

Week 3 Planner - Fourth Grade
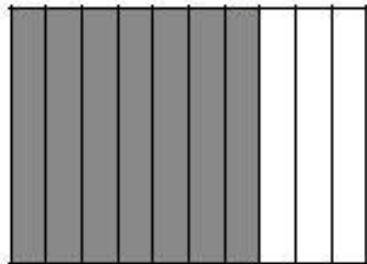
5/4 - 5/8	Monday	Tuesday	Wednesday	Thursday	Friday
Math: I can write numbers in decimal form for tenths and hundredths	- MyMath pp. 635-636 - Practice multiplication facts for 5 minutes - Practice division facts for 5 minutes - Math game or MobyMax/Prodigy	- MyMath pp. 641-642 (Tenths) - Practice multiplication facts for 5 minutes - Practice division facts for 5 minutes - Math game or MobyMax/Prodigy	- MyMath pp. 647-648 (Hundredths) - Practice multiplication facts for 5 minutes - Practice division facts for 5 minutes - Math game or MobyMax/Prodigy	- Tenths and hundredths "Check My Progress" page - Practice multiplication facts for 5 minutes - Practice division facts for 5 minutes - Math game or MobyMax/Prodigy	- Converting Fractions to Decimals Task Cards - Practice multiplication facts for 5 minutes - Practice division facts for 5 minutes - Math game or MobyMax/Prodigy
Reading: I can read a paired text and refer to and cite details in the text to answer questions	- Read the paired sources "Can Animals Talk?" and "Sneaky Animal Signals." - Read 20-30 free choice	-Answer #1 -Ace outline for #2 - Read 20-30 free choice	- Write ACE paragraph for #2 - Read 20-30 free choice	- Read 20-30 free choice	- Read 20-30 free choice
Writing: I can write an informational essay citing sources to explain my reasoning	- Over the next two weeks, you will write an informational article citing evidence from "Can Animals Talk?" and "Sneaky Animal Signals" - Read the articles and underline evidence to answer how animals "talk" to other animals.	- Complete outline for Paragraph One (the Introduction on ACE or OREO outline)	- Complete outline for Paragraph Two	-Complete outline for Paragraph Three	- Complete outline for Paragraph Four
Science: I can explain the advantages and disadvantages of wind power	- Watch the video <u>What are the Pros and Cons of Different Energy Sources?</u>		- Types of Energy Scavenger Hunt		- Comparing and Contrasting Two Energy Sources

Decimals

A **decimal** is a number that represents a piece of a whole shown with a decimal point (●) and place values to the right of the decimal point.
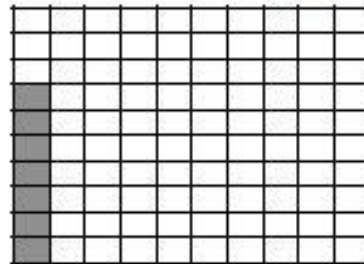
"AND"

Hundreds	Tens	Ones	•	Tenths	Hundredths
100	10	1	●	$n/10$	$n/100$

← Numbers get **larger** to the **LEFT** x10.

Numbers get **smaller** to the **RIGHT** x10. →
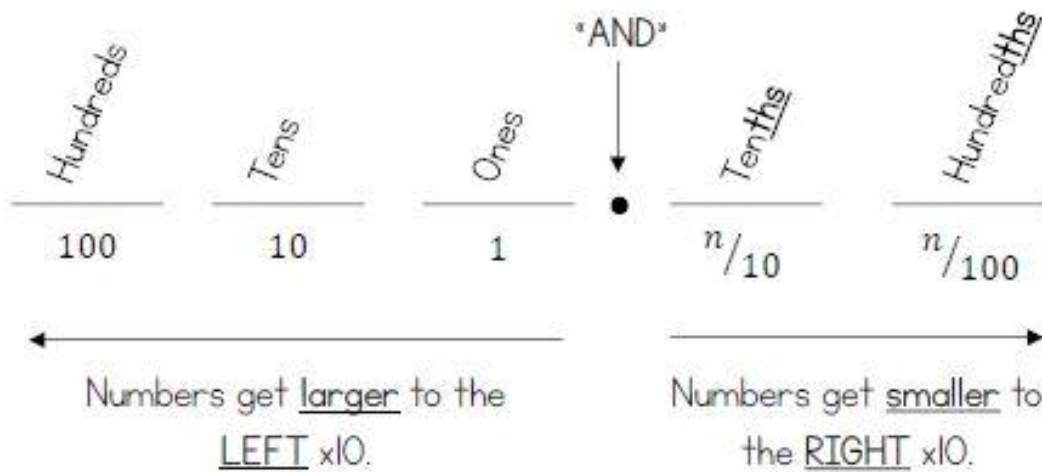
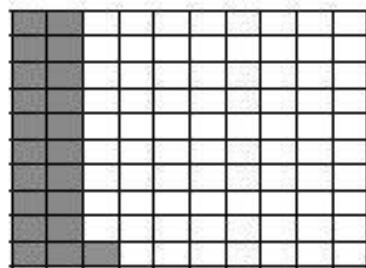seven tenths = $\frac{7}{10}$ = 0.7

"tenths" 10 – one zero → one place value

seven hundredths = $\frac{7}{100}$ = 0.07

"hundredths" 100 – two zeroes → two place values

twenty-one hundredths = $\frac{21}{100}$ = 0.21

0.2 1

2 tenths   1 hundredth

More Examples:

sixty-seven hundredths = 0.67
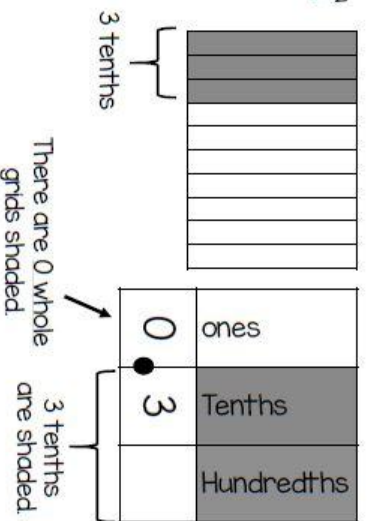
eight tenths = 0.8

six hundredths = 0.06
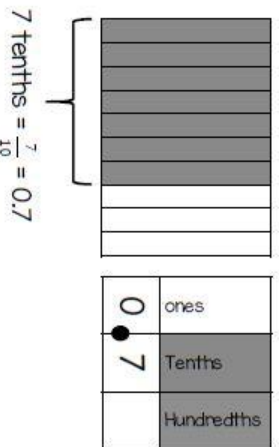
Decimals – Tenths

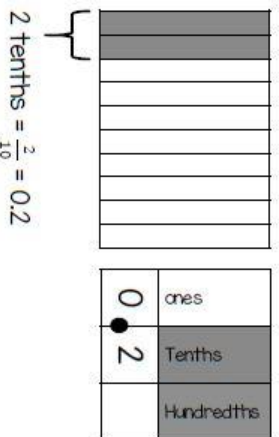Model and write *three out of ten* as a decimal. Three tenths of the model is shaded.

- This is the same as 0.3
- In words, this is three tenths.
- As a fraction, this is $\frac{3}{10}$.

There are 0 whole grids shaded.

3 tenths are shaded.

ones	
0 • 3	**Tenths**
	Hundredths

EXAMPLE 1: seven tenths

7 tenths = $\frac{7}{10}$ = 0.7

ones	
0 • 7	Tenths
	Hundredths

EXAMPLE 2: two out of ten

2 tenths = $\frac{2}{10}$ = 0.2

ones	
0 • 2	Tenths
	Hundredths

EXAMPLE 3: use words to describe 0.9

0.9 is nine out of ten, or 9 tenths.

ones	
0 • 9	Tenths
	Hundredths
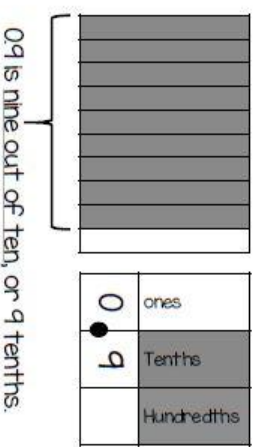
EXAMPLE 4: Use words to describe 0.4

0.4 is four out of ten, or 4 tenths.

ones	
0 • 4	Tenths
	Hundredths
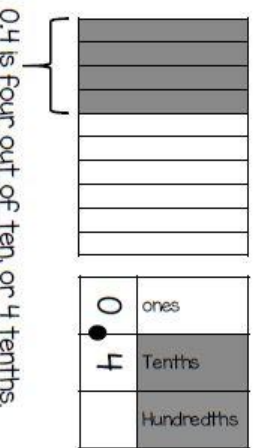
Decimals on a Number Line – Tenths

EXAMPLE 1: Label 0.6 on a number line.

Step 1: Draw a number line and label your endpoints. Your first endpoint should start at zero, and the second endpoint should be one.
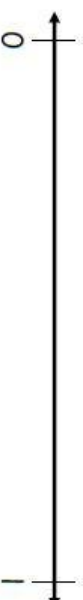
Step 2: Partition (divide) your number line.
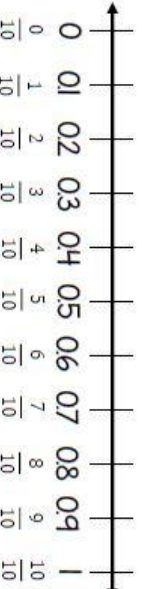
Think:
The "6" in 0.6 is in the tenths place. So 0.6 is the same as $\frac{6}{10}$. That means I should partition each whole into 10 parts.

$\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$ $\frac{7}{10}$ $\frac{8}{10}$ $\frac{9}{10}$ $\frac{10}{10}$

Step 3: Label the decimal on the number line by counting the spaces between the tick marks. Remember: there are 10 parts in each whole, so each space is 0.1 or $\frac{1}{10}$.

$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$

EXAMPLE 2: Label 0.3 on a number line.

Think: 0.3 is the same as $\frac{3}{10}$. That means I should partition each whole into 10 parts.

$\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$ $\frac{7}{10}$ $\frac{8}{10}$ $\frac{9}{10}$ $\frac{10}{10}$

EXAMPLE 3: Label 0.8 on a number line.

Think: 0.8 is the same as $\frac{8}{10}$. That means I should partition each whole into 10 parts.

$\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$ $\frac{7}{10}$ $\frac{8}{10}$ $\frac{9}{10}$ $\frac{10}{10}$

Decimals – Hundredths

There are 37 squares shaded out of a total of 100 squares.

- As a fraction, this is $\frac{37}{100}$.
- In words, this is thirty-seven hundredths.
- This is the same as 3 tenths and 7 hundredths.
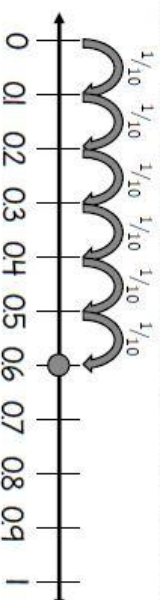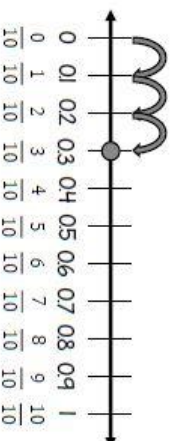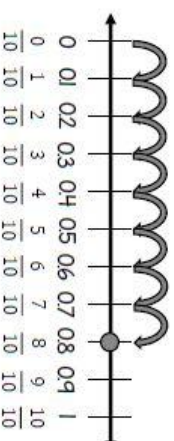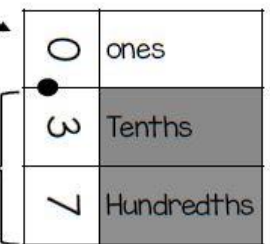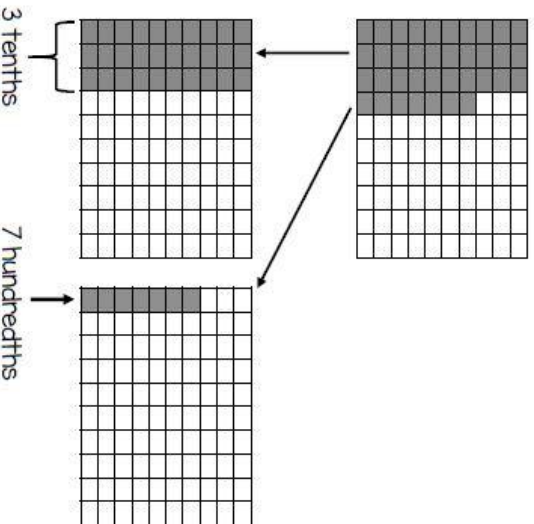
There are 0 whole grids shaded.

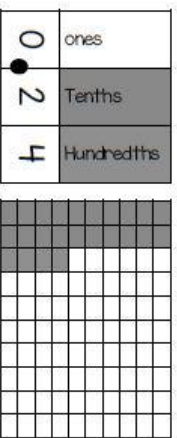37 hundredths is 3 tenths and 7 hundredths.

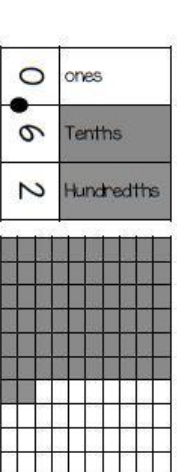| ones	Tenths	Hundredths
0 .	3	7

3 tenths

7 hundredths

EXAMPLE 1: 24 out of 100

- As a fraction, this is $\frac{24}{100}$.
- In words, this is twenty-four hundredths.
- This is the same as 2 tenths and 4 hundredths.

ones	Tenths	Hundredths
0 .	2	4

There are 0 whole grids shaded.

24 hundredths is 2 tenths and 4 hundredths.

EXAMPLE 2: 62 out of 100

- As a fraction, this is $\frac{62}{100}$.
- In words, this is sixty-two hundredths.
- This is the same as 6 tenths and 2 hundredths.

ones	Tenths	Hundredths
0 .	6	2

There are 0 whole grids shaded.

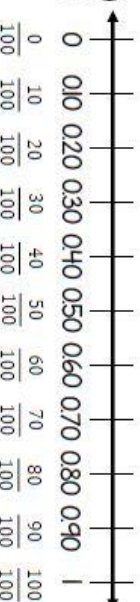62 hundredths is 6 tenths and 2 hundredths.

Decimals on a Number Line – Hundredths

EXAMPLE 1: Label 0.45 on a number line.

Step 1: Draw a number line and label your endpoints. Your first endpoint should start at zero, and the second endpoint should be one.

0 — 1

Think: I know that $\frac{1}{10}$ is the same as $\frac{10}{100}$. I need ten $\frac{1}{10}$ to make one whole. That means I should partition each whole into 10 parts.

Step 2: Partition (divide) your number line.

0 $\frac{010}{100}$ $\frac{020}{100}$ $\frac{030}{100}$ $\frac{040}{100}$ $\frac{050}{100}$ $\frac{060}{100}$ $\frac{070}{100}$ $\frac{080}{100}$ $\frac{090}{100}$ 1

Step 3: Label the decimal on the number line by counting the spaces between the tick marks. Remember: there are 10 parts in each whole, so each space is 0.10 or $\frac{10}{100}$.
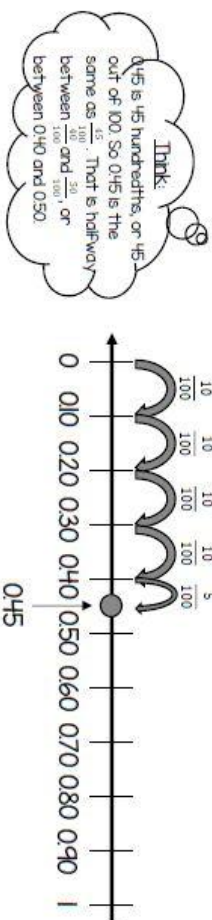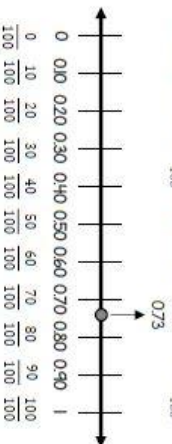
Think: 0.45 is 45 hundredths, or 45 out of 100. So 0.45 is the same as $\frac{45}{100}$. That is halfway between $\frac{40}{100}$ and $\frac{50}{100}$, or between 0.40 and 0.50.

0 $\frac{010}{100}$ $\frac{020}{100}$ $\frac{030}{100}$ $\frac{040}{100}$ $\frac{050}{100}$ $\frac{060}{100}$ $\frac{070}{100}$ $\frac{080}{100}$ $\frac{090}{100}$ 1
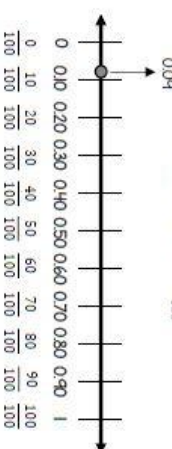
045

EXAMPLE 2: Label 0.73 on a number line.

Think: 0.73 is the same as $\frac{73}{100}$. That means it will be less than 0.80, or $\frac{80}{100}$, but greater than 0.70, or $\frac{70}{100}$.

073

0 $\frac{010}{100}$ $\frac{020}{100}$ $\frac{030}{100}$ $\frac{040}{100}$ $\frac{050}{100}$ $\frac{060}{100}$ $\frac{070}{100}$ $\frac{080}{100}$ $\frac{090}{100}$ 1

EXAMPLE 3: Label 0.09 on a number line.

Think: 0.09 is the same as $\frac{9}{100}$. That means it will be just before 0.10, or $\frac{10}{100}$.

009

0 $\frac{010}{100}$ $\frac{020}{100}$ $\frac{030}{100}$ $\frac{040}{100}$ $\frac{050}{100}$ $\frac{060}{100}$ $\frac{070}{100}$ $\frac{080}{100}$ $\frac{090}{100}$ 1

Real Life Connection - Decimals and Money
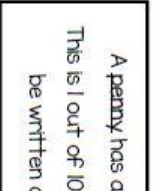
There are 100 cents in each dollar bill ($1.00).

A quarter has a value of 25 cents. This is 25 out of 100 cents, which can be written as $\frac{25}{100}$ or $0.25

A dime has a value of 10 cents. This is 10 out of 100 cents, which can be written as $\frac{10}{100}$ or $0.10

A nickel has a value of 5 cents. This is 5 out of 100 cents, which can be written as $\frac{5}{100}$ or $0.05

A penny has a value of 1 cent. This is 1 out of 100 cents, which can be written as $\frac{1}{100}$ or $0.01

Write a decimal for each part of a dollar shown.

EXAMPLE 1

25 cents   5 cents   1 cent

25 + 15 + 1 = 41 cents
41 cents is 41 out of 100, or $0.41

EXAMPLE 2

60 cents   10 cents   3 cents

60 + 10 + 3 = 73 cents
73 cents is 73 out of 100, or $0.73

Comparing Decimals

1) Use a model

0.67   0.67 (<) 0.9   0.9

<
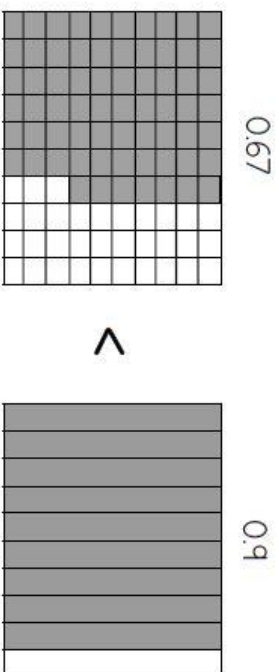
2) Use place value

Compare from the highest to lowest place value: ones → tenths → hundredths

1.53 (>) 0.76

Ones	Tenths	Hundredths
0	5	3
	7	6

1.2 (=) 1.20

	Ones	Tenths	Hundredths
1		2	
1		2	0

1.09 (<) 1.90

	Ones	Tenths	Hundredths
1		0	9
1		9	0

3) Use a number line

0.45 → 0.45

0.5 (>) 0.45

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
$\frac{40}{100}$ $\frac{50}{100}$

Name ....
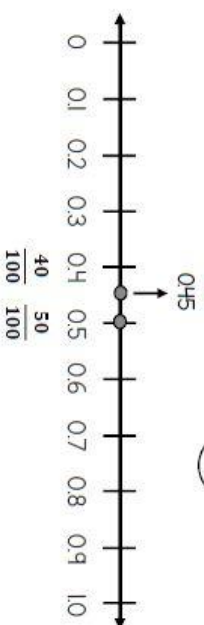
MY Homework

Lesson 1

Hands On: Place Value Through Tenths and Hundredths

Homework Helper

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Complete the place-value chart that represents the fraction of the grid that is shaded.

There are 46 squares shaded out of a total of 100 squares.

In words, this is *forty-six hundredths*.
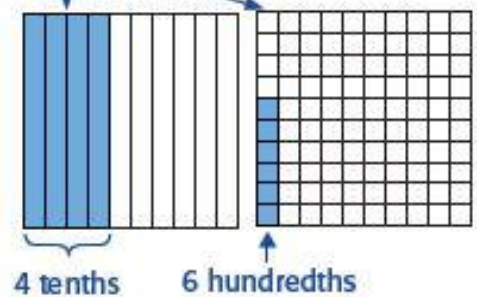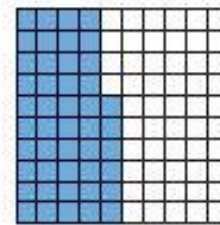
This is the same as 4 tenths and 6 hundredths.

Write 4 tenths and 6 hundredths in the place-value chart below.

4 tenths   6 hundredths

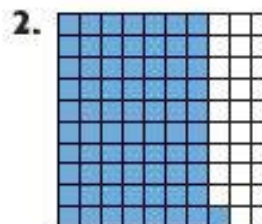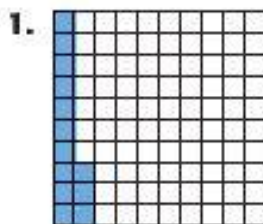| Ones	Tenths	Hundredths

There are 0 whole grids shaded.

4 tenths and 6 hundredths is 46 hundredths.
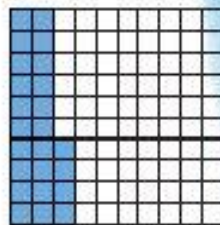
Practice

Write the decimal represented by each model.

1. _____

2. _____

Problem Solving

3. Kristy has 100 buttons in her button collection. She has 24 red buttons. Write a decimal to show the part of her collection of buttons that is red.

_____

4. Harry and Dario went to the county fair. There were ten rides, but they only had time to ride six. What decimal shows the part of the rides that they rode?

_____
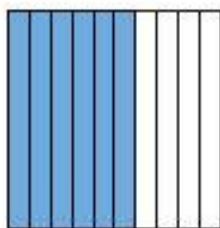
5. There are ten swings on the playground. Eight children are swinging on the swings. Write a decimal to show the part of the swings that are being used.

_____
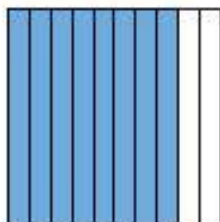
6. There are 100 students in the fourth grade. Five of these students are absent today. Write a decimal to show the part of the students that are absent.

_____
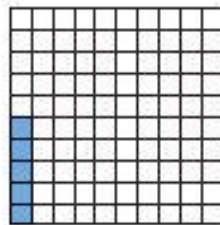
Vocabulary Check

Draw a line to match each word to its definition.

7. decimal

8. tenth

9. hundredth

• one part of ten equal parts

• a number that uses place value and a decimal point to show part of a whole

• one part of one hundred equal parts

Tuesday Week 3

MY Homework →

Lesson 2

Tenths

Homework Helper

eHelp

Need help? ⟋ connectED.mcgraw-hill.com

Model and write *six out of ten* as a decimal.
Six tenths of the model is shaded.

Ones	Tenths	Hundredths
0 .	6	
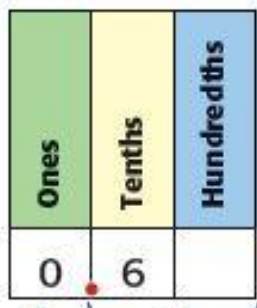
There are 0 whole grids shaded.

6 tenths are shaded.
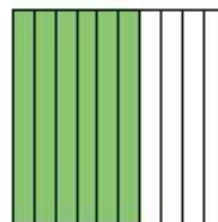
So, six out of ten is 0.6.

Practice

Model and write each decimal.

1. two out of ten

2. four out of ten
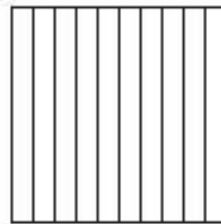
Use words to describe each decimal.

3. 0.3

4. 0.8

Write each of the following as a decimal. Then graph each point on the same number line.

5. one out of ten equal parts

6. seven out of ten equal parts

_____   _____

```
<----+----+----+----+----+----+----+----+----+----+----+---->
     0   0.1  0.2  0.3  0.4  0.5  0.6  0.7  0.8  0.9   1
```

I have a bunch of friends!

Problem Solving

7. Traci is playing a game at the circus. She has ten chances to throw a dart at a balloon. She hits the balloon 8 out of ten times. Write a decimal to show how many times Traci hit the balloons.

_____

8. Jackie took a science quiz. She only answered one out of ten problems incorrectly. Write a decimal to show the part of the quiz that Jackie answered correctly.

_____

9. **Mathematical PRACTICE 4** **Model Math** Carter's mom bought ten fruits at the grocery store. Seven of the fruits are bananas. Write a decimal to show the part of the fruits that are bananas.

_____

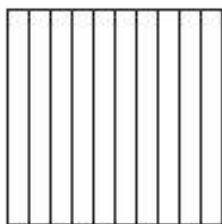**10.** A parking lot has ten parking spaces. There are five cars parked in the parking lot. Write a decimal to show the part of the parking lot that has empty parking spaces.

_____

Test Practice

11. Which decimal represents the part of the model that is shaded?

   Ⓐ 0.04   Ⓒ 0.4

   Ⓑ 0.1   Ⓓ 4.0

Name ....

MY Homework

Lesson 3
Hundredths

Homework Helper

Need help? connectED.mcgraw-hill.com
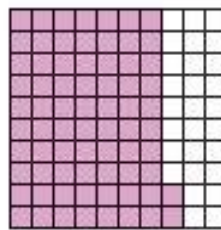
On a video game, Sandra scored 72 points out of a possible 100 points. What part of the possible points did she score? Write as a decimal.

1 Use a model.

The model shows 72 shaded parts out of 100. This is *seventy-two hundredths*, or 0.72.

2 Use a place-value chart.

Write 72 hundredths in the place-value chart.

Ones	Tenths	Hundredths

Read this decimal as *seventy-two hundredths.*

There are 0 whole grids shaded.

72 hundredths is 7 tenths and 2 hundredths.

So, Sandra scored 0.72 of the possible points..

Practice

Write a decimal for each part of a dollar shown.

1.

2.

Problem Solving

3. Dexter bought an apple. He paid using the coins shown below.

Write a decimal to show the part of a dollar that he paid.

_____

4. Daniel had a social studies quiz. He answered eighty-seven out of 100 exercises correctly. Write a decimal to show the part of the quiz that Daniel answered correctly.

_____

5. **Mathematical PRACTICE 4 Model Math** Claire has three nickels, two quarters, and one dime in her pocket. Write a decimal to show the part of a dollar that Claire has in her pocket.
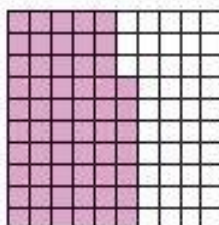
_____

6. **Mathematical PRACTICE 6 Be Precise** Explain how you know which coins could be used to show 0.77 of a dollar.

_____

_____

_____

Test Practice

7. Which decimal shows fifty-seven out of one hundred?
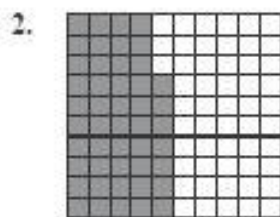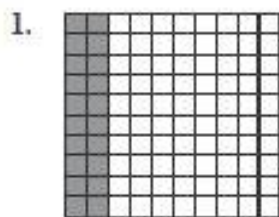
Ⓐ 0.57   Ⓒ 5.70

Ⓑ 0.75   Ⓓ 57.0

Name _____ Date _____

Check My Progress   *(Lessons 1 through 3)*

Write the decimal represented by each model.

1.   2.   1. _____

2. _____

Write each decimal.

3. eight out of ten   3. _____

4. six tenths   4. _____

Use words to describe each decimal.

5. 0.7   5. _____

6. 0.1   6. _____

Write a decimal for each part of a dollar shown.

7.   7. _____

8.   8. _____

Compare. Use >, <, or =. Use a number line to check your work.

9. 0.20 ▨ 0.2   9. _____

10. 0.45 ▨ 0.51   10. _____

Solve.

11. Lucas scored 94 out of 100 on his math test. Show his score as a decimal.   11. _____
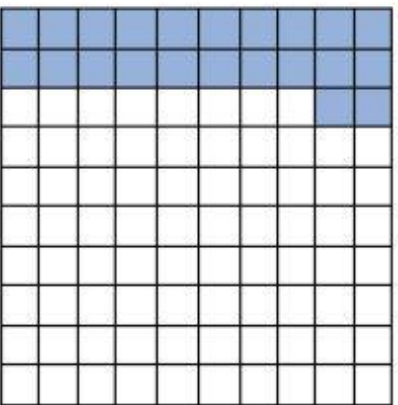
12. Mary walked 0.45 mile. Sasha walked 0.27 mile. Kent walked 0.39 mile. Who walked the least?   12. _____

Name: _____

DeCimals & FRaCtions

1

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

DeCimals & FRaCtions

2

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

DeCimals & FRaCtions

3

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

DeCimals & FRaCtions

4

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

Name: _____

5

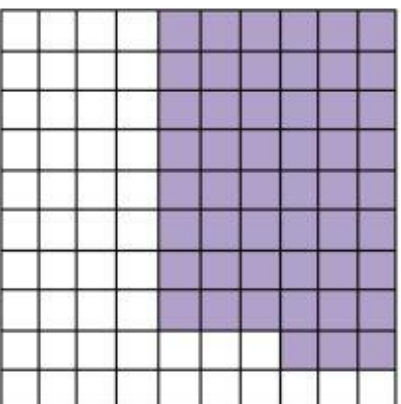## DECIMALS & FRACTIONS

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

6

DECIMALS & FRACTIONS

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.
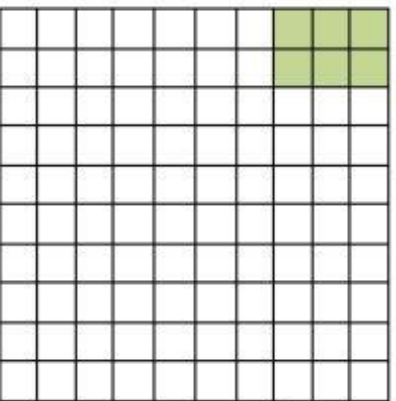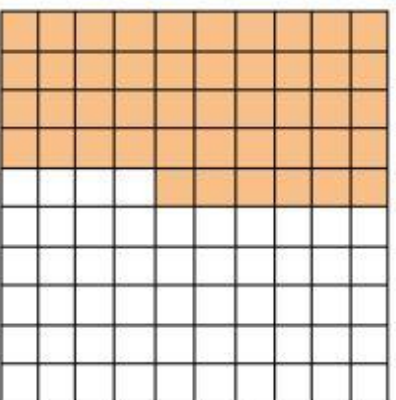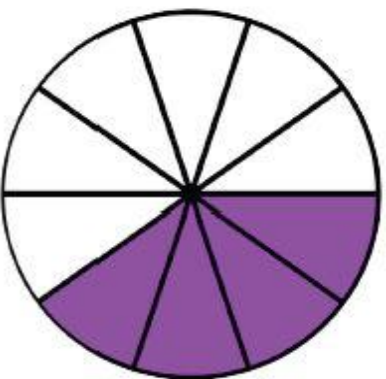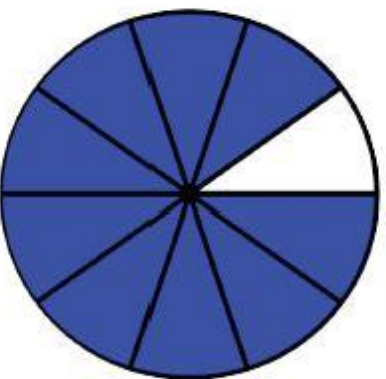
7

DECIMALS & FRACTIONS

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.
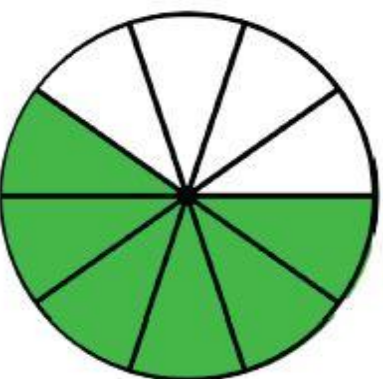
8

DECIMALS & FRACTIONS

Evaluate the model and write the shaded portion as a fraction <u>and</u> a decimal.

Name: _____

9 Decimals & Fractions

Write the decimal for Point A, then convert it to a fraction.

A

0   0.05   0.10
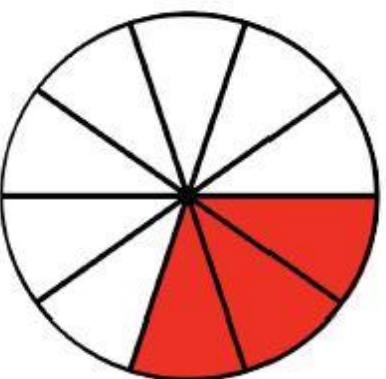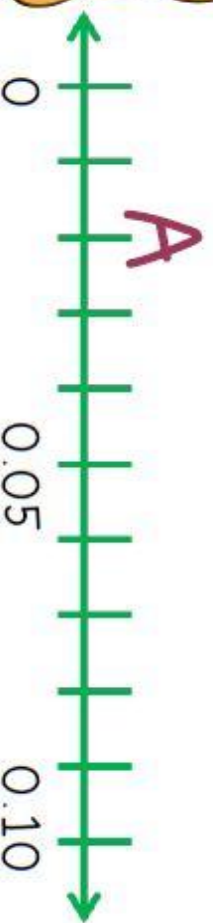
10 Decimals & Fractions

Write the decimal for Point B, then convert it to a fraction.

B

0   0.05   0.10

11 Decimals & Fractions

Write the decimal for Point C, then convert it to a fraction.

C

0   0.05   0.10

12 Decimals & Fractions

Write the decimal for Point D, then convert it to a fraction.

D

0   0.05   0.10

13 Decimals & Fractions

Write the decimal for Point A, then convert it to a fraction.

0 — 0.5 — A — 1

14 Decimals & Fractions

Write the decimal for Point B, then convert it to a fraction.

0 — B — 0.5 — 1

15 Decimals & Fractions

Write the decimal for Point C, then convert it to a fraction.

C
0 — 0.5 — 1

16 Decimals & Fractions

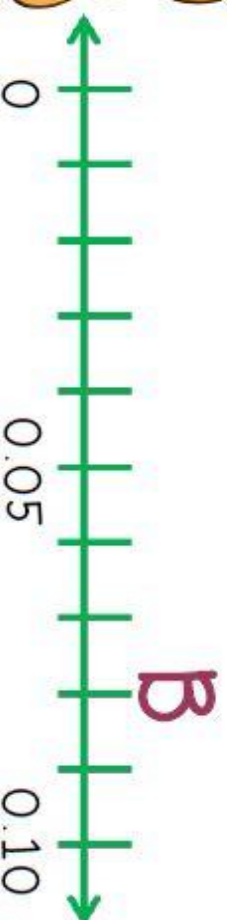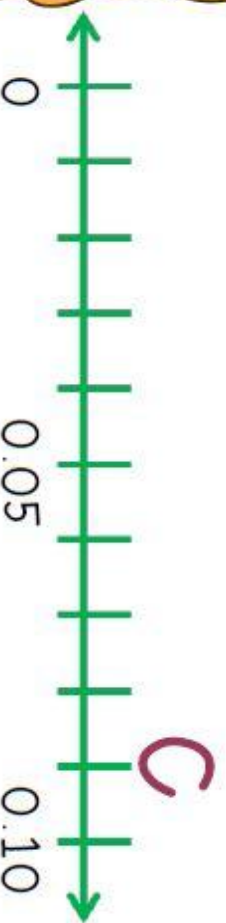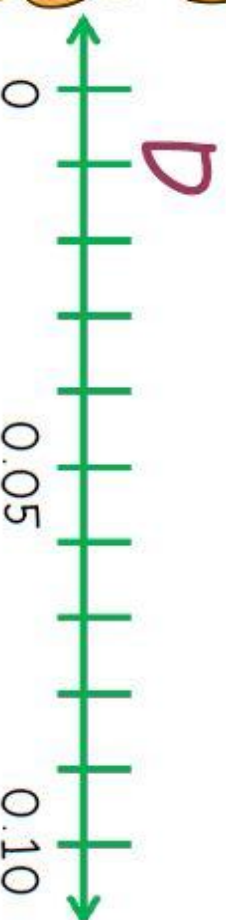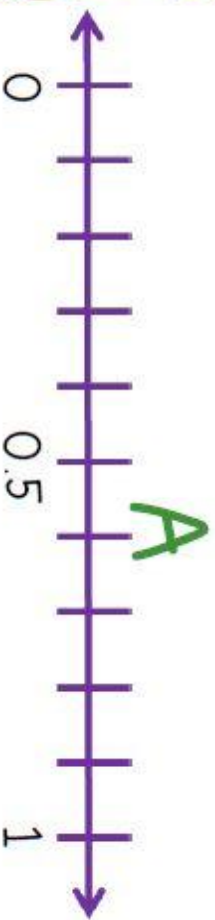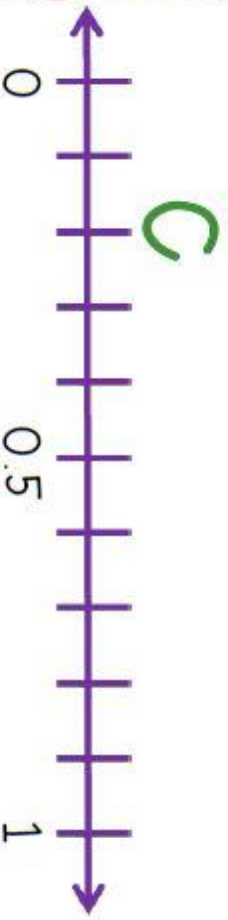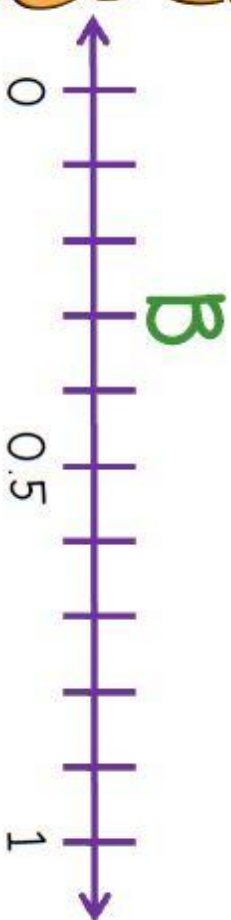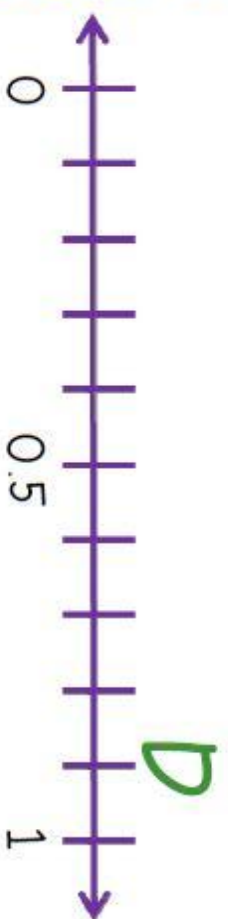Write the decimal for Point D, then convert it to a fraction.

0 — 0.5 — D — 1

Source 1: Can Animals Talk?

People share thoughts and feelings using words. How about animals? Many people think that animals cannot communicate with each other. After all, only humans use words. However, we can also tell each other things without words. We wave our hands to 'say' hello and goodbye. We smile, frown and raise our eyebrows to share how we feel and what we think. Believe it or not, some animals can also tell each other many things without using words. Here are a few examples.

Animal Sounds

Animals do not use words or language, but they do make many kinds of sounds. These sounds tell other animals things they need to know. Robins find each other using chirps and songs. Cobras hiss warnings. Blue whales sing low, loud notes to call out to other whales. Scientists now understand that animal songs can vary depending on where each animal lives. So animals can have different accents!

Vervet monkeys warn other monkeys using special sounds. A "cough call" means danger overhead. When the monkeys hear the cough call, they take cover under bushes and look to the skies and hide from flying predators like eagles. But Vervet monkeys give a completely different warning sound if danger comes on land, such as an oncoming leopard.

Peacocks use their tail feathers to make special sounds, which are so low that human ears cannot hear them! But peahens (female peacocks) can hear them. When they hear tail feathers rustle, they come to see what all the noise is about.

Animal Gestures

Many animals communicate using body language. In Rwanda's Volcanoes National Park, gorillas beat their chests. Are they angry? No, they are happy and letting the other gorillas know how they feel. Dogs let people and other animals know they are happy by wagging their tails. Animals can also send warnings with body language. When cats arch their backs, they are saying, "Stay away!"

GO ON →

Many animals also reach out to express themselves. Chimpanzees help groom their friends. Using their hands, they pat their friends on the back and help keep their fur clean. Grooming leads to cooperation and sharing in the group. This sends the message that they are friends.

Even animals in the seas use touch to tell how they are feeling. Sea otters rub noses with each other. They may even touch noses with other animals like seals and sea lions! This "nosing around" signals play and trust.

So, can animals actually talk? The short answer is 'no.' Only humans can use words as language. However, animals communicate in many ways. The more we study animals, the more we learn about other methods of communication.

Source 2: Sneaky Animal Signals

Many animals communicate with sights and sounds. Dogs wag their tails. Chickens strut. Pigs grunt. Cats meow. But did you know that some animals can give and receive messages in ways we cannot? Some animals use their powers of touch, taste, and smell to send and receive signals that we can't even sense. How sneaky!

Charged with Feeling
Did you know that some types of fish use electricity to communicate? Some fish send electrical pulses that bounce back to them and tell them where good food is. Other fish, like sharks, for example, can feel the electrical signals of their prey. This way, they can "feel" where their food is. The electrical pulses are not dangerous. They are weak electrical signals that cannot hurt other animals or people. We can't even feel them. Electrical signaling is an ideal type of communication for animals that live in dark, unclear waters.

Chemical Tastes and Smells
Some animals can detect chemical cues that we can't sense at all. Snakes can use their special forked tongues to "taste" the scent of animals in the air. Snakes can tell which chemical cues belong to dangerous animals and which come from animals that would make a good dinner. Snakes have receptors in the roofs of their mouths that help them sense the chemical cues of animals nearby.

GO ON →

Have you ever smelled skunk spray? Skunks spray a stinky odor to protect themselves from predators like bears that otherwise would try to eat them! Some animals have scents they use to communicate that we can't detect at all. Have you ever seen a cat rub its head against something? It is marking its territory. Cats have scent glands near their mouths, on their foreheads, and at the base of their tails. They use these organs to mark territory and tell other cats to stay away. Insects communicate with scents, too. Some moths make special chemicals that other moths can sense to find them.

Many animals say things through songs, growls, and whistles. But it is amazing to know that some animals send signals that no one can hear. They can send these signals in daylight or the dark of night. They learn things this way. Animals have a lot to say. We just don't always understand how they say it. Scientists are working to learn more about animals and the incredible signals they use.

GO ON →

1 Match each detail to the source or sources in which the detail is given. Draw a line from **each** detail to its source.

Source 1: Can Animals Talk?   Pulses of electricity can help in finding food.

Source 2: Sneaky Animal Signals   Senses help animals communicate.

Both Source 1 and Source 2   Sounds can warn of danger.

2 Read the sentence from "Sneaky Animal Signals."

But it is amazing to know that some animals send signals that no one can hear.

What details from each source support this sentence? Use **one** detail from **each** source to support your explanation. Be sure to give the source number or title for each detail.

_____

_____

_____

_____

_____

_____

GO ON →

Name: _____

ACE the Answer, Superstar ⭐

? Write the question

"But it is amazing to know that some animals send signals that no one can hear." What details from each source supports this sentence?

A (Restate the question and) Answer

C₁ Cite

E₁ Evidence

⭐ Analyze

C₂ Cite

E₂ Evidence

⭐ Analyze

Conclusion

*Please choose **ONE** outline (the ACE Outline **OR** the OREO Outline) to plan your rough draft for this essay.

Directions for Part 2

You will now look at your sources, take notes, and plan, draft, revise, and edit your article for the website. First read your assignment and the information about how your informational article will be scored. Then begin your work.

Your Assignment:

Your class is creating a website about amazing things animals can do. For your part of the website, you will write an informational article about how animals "talk" to other animals. Your article will be read by other students, teachers, parents, and other people who visit the website.

Using information from the two sources, "Can Animals Talk?" and "Sneaky Animal Signals," develop a main idea about how animals communicate. Choose the most important information from more than one source to support your main idea. Then, write an informational article several paragraphs long. Clearly organize your article and support your main idea with details from the sources.

Use your own words except when quoting directly from the sources. Be sure to give the source title when using details from the sources.

REMEMBER: A well-written informational article

- has a clear main idea
- is well-organized and stays on the topic
- has an introduction and conclusion
- uses transitions
- uses details from the sources to support the main idea
- develops ideas fully
- uses clear language
- follows rules of writing (spelling, punctuation, and grammar)

Now begin work on your informational article. Manage your time carefully so that you can plan, write, revise, and edit the final draft of your article. Write your response on a separate sheet of paper.

STOP

Name: _____

Paragraph I: Introduction

Topic Sentence/Hook:

What I know/Personal Experience:

What I read:

Answer the Question:

Name: _____

Paragraph 2: Citing Sources/Evidence for Your Answer

Answer the question

Cite source

Evidence

Explain your evidence using details and examples from the text

Analyze: why is this important?

Cite source

Evidence

Explain your evidence using details and examples from the text

Analyze: why is this important?

conclusion sentence

Name: _____

Paragraph 3: Citing Sources/Evidence for Your Answer

Answer the question

Cite source

Evidence

Explain your evidence using details and examples from the text

Analyze: why is this important?

Cite source

Evidence

Explain your evidence using details and examples from the text

Analyze: why is this important?

conclusion sentence

Paragraph 4: Conclusion

Restate your answer

Restate Reasons (brief retelling of evidence and reasoning)

Name: _____

Paragraph I: Introduction

Topic Sentence/Hook:

2-3 Sentences of General Information about Topic:

Thesis Statement: Answer the question (you should have 2 Arguments)

Name: _____

Paragraph 2

O—Opening Sentence for Argument #1

R₁ – Reason 1	R₂ – Reason 2
E (cite Evidence and Explain)	E (cite Evidence and Explain)
E (cite Evidence and Explain)	E (cite Evidence and Explain)

O—restate Opening Sentence

Name: _____

Paragraph 3

O—Opening Sentence for Argument #2

R₁ – Reason 1	R₂ – Reason 2
E (cite Evidence and Explain)	E (cite Evidence and Explain)
E (cite Evidence and Explain)	E (cite Evidence and Explain)

O—restate Opening Sentence

Name: _____

Paragraph 4: Conclusion

Restate your answer

Restate Reasons (brief retelling of reasons and evidence)

Make it Matter (Why is it important that we know this?)

TwigScience

Non-renewable energy sources will eventually run out, while renewable energy sources will last forever.

Does this mean that renewable sources are a better way of generating power than nonrenewable?

Let's see which one wins the energy debate.

Pollution:

Burning nonrenewable fossil fuels to generate power produces gases, which pollute the air and cause global warming.

Renewable energy sources don't need fuel to produce power and they don't produce harmful gases.

Cost:

At the moment renewable energy isn't very efficient.

It only generates a fraction of the power needed by the world.

To significantly increase the amount of energy from renewable sources we need to spend billions of dollars developing the technology, building infrastructure like solar farms, wind turbines and new power lines.

Once up and running though, the wind, water and Sun are freely available – if not always reliable.

We already have the power plants that burn fossil fuels, but coal, gas and oil have to be constantly extracted from the earth to top up our supplies.

Not only is extraction costly, but there is the possibility of environmental disaster such as oil spills and explosions.

Effect on the landscape:

Mining for fossil fuels can also create unsightly scars on the landscape.

But what do you think about the appearance of wind farms or solar panels?

Many people think they are just as ugly.

Energy from nonrenewable sources is cheaper and more practical today.

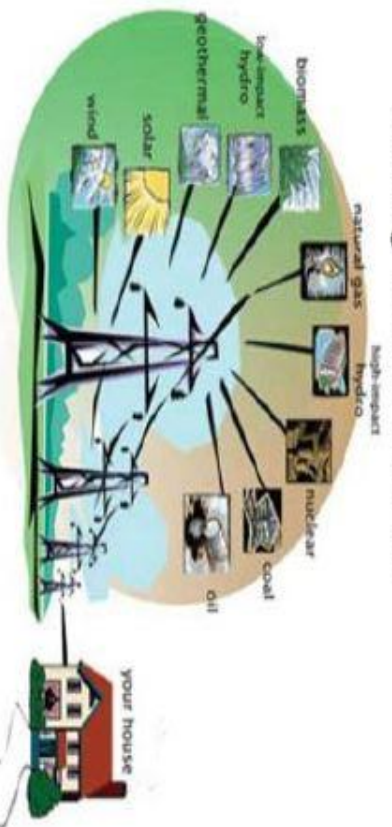But in the future, renewable energy may win the energy debate by being cleaner and longer lasting.

Energy Debate arguments: pollution, cost, and effect on the landscape.

Solar
Energy

Wind
Energy

Hydro
Energy

Fossil Fuel
Energy

Name: _____
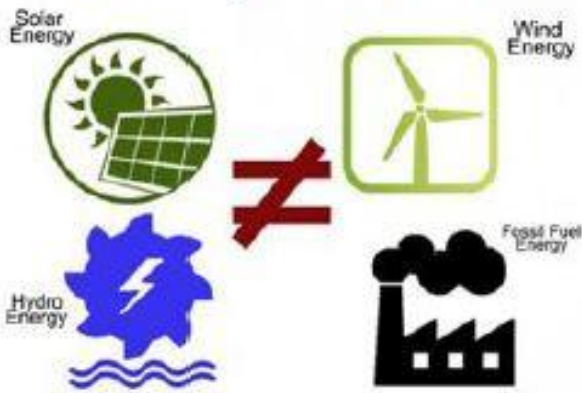
Types of Energy Scavenger Hunt

Directions: Look around your house or your neighborhood and find different types of energy. Record your observations in the chart below.

Type of Energy	List Examples of How the Energy being Used	Illustrate an Example of Energy being Used

Name: _____

Comparing and Contrasting Energy Sources

Directions: Choose any two types of energy sources to research and fill in the Venn Diagram showing how they are used in similar and different ways.

Energy Source Type

Energy Source Type

Different

Alike

Different