ThinkUp! MATH

TABLE OF CONTENTS

Getting Started

(student pages 107–114)

Introduction

"Handcrafted Hope" is an informational text in the format of a report written by a student and posted by his teacher on a class website. The report includes an embedded procedural text. A cross-curricular connection for this unit might focus on community service organizations.

Lexile Text Measure 940L

Building Background Knowledge

Introduce this unit by providing information about the African culture to establish a framework of understanding for students. Invite a representative from a local non-profit service organization to present information about the organization's purpose and activities. Gather and share information with students about additional community organizations that serve others. Have students record notes during the presentations and include in learning logs.

(W.5.4, SL.5.1, SL.5.2, SL.5.3, DOK: 2, Bloom's/RBT: Comprehension/Understand)

Suggested Formative Assessment

Have students organize information about a specified service group on a three-column chart labeled *Organization, Purpose, Activities*. Review student responses to determine individual understanding of organizing information on a graphic organizer.

(W.5.4, DOK: 2, Bloom's/RBT: Comprehension/Understand)

Suggested Unit Content Literature

Continue building student knowledge related to this unit by selecting books from the following list for read alouds, for student independent reading, and for research resources.

- *Anansi the Spider: A Tale from the Ashanti* – Gerald McDermott
- *The Spider Weaver: A Legend of Kente Cloth* – Margaret Musgrove
- *Fun with African Design Stencils* – Marty Noble
- *Kente Colors* – Debbi Chocolate
- *Ghana* – Lucile Davis
- *African Crafts: Fun Things to Make and Do from West Africa* – Lynne Garner
- *The Kid's Guide to Social Action: How to Solve the Social Problems You Choose—And Turn Creative Thinking into Positive Action* – Barbara A. Lewis
- *Volunteering to Help Seniors* – Patrick Newell
- *The Kid's Guide to Service Projects: Over 500 Service Ideas for Young People Who Want to Make a Difference* – Barbara A. Lewis
- *Make Your Own Web Page!–A Guide for Kids* – Ted Pedersen and Francis Moss

(RL.5.10, RI.5.10, RF.5.4, RF.5.4a, RF.5.4b, RF.5.4c, SL.5.1, SL.5.2, SL.5.3, SL.5.4, SL.5.5, SL.5.6, DOK: 3, Bloom's/RBT: Comprehension/Understand)

Vocabulary Focus

*Teachers using this selection for direct instruction may need to preteach these vocabulary words. If the unit selection is used for assessment, vocabulary should not be pretaught.

Selection-Specific Vocabulary

complex	products
financially	secure
generations	traditional
handcrafted	unique
organization	volunteers

Standard Vocabulary

concept	information
explain	interaction
event	relationship
historical text	scientific text
idea	technical text
individual	text

Vocabulary Activities

Lookout for Words

Have students complete *Lookout for Words* graphic organizers by placing unfamiliar and Selection-Specific vocabulary words in appropriate columns. While reading the text, instruct students to record page numbers, paragraphs, and words. After reading, have students use print and digital dictionaries to record definitions.

(RI.5.4, W.5.4, L.5.4, L.5.4a, L.5.4c, DOK: 2, Bloom's/RBT: Comprehension/Understand)

Lookout for Words

Before You Read	While You Read			After You Read
Title of Text	Page Number	Paragraph	Word	Definition

Unit Specific Journals

Have students develop unit specific vocabulary journals. Instruct students to record the Selection-Specific words, as well as other unfamiliar words encountered while reading the unit text. Direct students to use print or digital dictionaries to record definitions, synonyms, examples, associations, and/or illustrations for the words. Encourage students to use the journals as references during the study of the unit.

(RI.5.4, RF.5.3, L.5.4, L.5.4c, L.5.6, DOK: 2, Bloom's/RBT: Application/Apply)

Suggested Formative Vocabulary Assessment

Using the journals from the *Unit Specific Journals* activity, instruct students to identify words when prompts are called (e.g., *Place number 1 by the word that means the same as* _____. *Place number 2 by the word that completes the sentence* _____.). Collect journals and use responses to evaluate levels of student understanding of vocabulary terms. Use the evidence to clarify misconceptions and to plan further instruction or interventions.

(RI.5.4, RF.5.3, SL.5.2, L.5.4, DOK: 1, Bloom's/RBT: Comprehension/Understand)

Unpacking the Standards

CCR Anchor Standard *CCRA.R.3*

Focus *RI.5.3*

Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

A logical connection demonstrates a **relationship** or **interaction** between two or more individuals, events, ideas, or concepts. Making connections within a text requires integrating information from that text. In order for students to determine relationships or interactions within a text, they must first apply content knowledge. Students also use text-relevant information and language to determine the interactions or connections. Often students must *read between the lines* to identify relationships or interactions because they are not directly stated by the author.

Within **historical texts**, often individuals and/or events are detailed so that readers can understand the cause-and-effect interactions or sequential relationships between the individuals and events.

Within **scientific texts**, often ideas or concepts are detailed so that readers can understand the interactions or relationships between elements, components, or steps.

Within **technical texts**, often concepts in the form of procedures are provided so that readers can understand the methods required for completing tasks.

Instructional Activities

Visual Comparison

After reading informational texts, have students select two individuals, events, ideas, or concepts from the texts. Instruct students to analyze the relationships or interactions between the shared elements and create products that display the analyses (e.g., poem, PowerPoint, chart, illustration). Allow students to share products with small groups.

(RI.5.3, RI.5.9, RI.5.10, W.5.4, SL.5.1, L.5.1, L.5.2, L.5.3, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Community Service Compare

Using a *Venn diagram*, have students compare and contrast two service groups using the information from the *Organization, Purpose, Activities* chart created in Suggested Formative Assessment of Building Background Knowledge. Allow students to share information from the *Venn diagrams* in small groups. Encourage students to revise *Venn diagrams* based on comments from others.

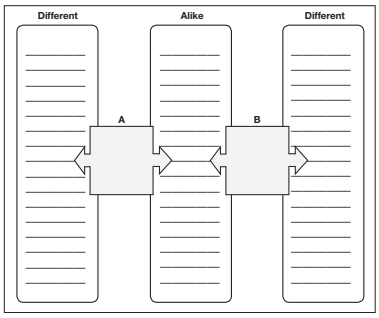
(RI.5.3, RI.5.9, RI.5.10, W.5.4, SL.5.1, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Suggested Formative Assessment

Using the *Compare and Contrast Chart*, have students list two of the three African crafts from the passage in the boxes labeled *A* and *B*. Instruct students to complete the chart listing likenesses and differences. Use student responses to clarify misconceptions and to plan further instruction or interventions.

(RI.5.3, RI.5.9, W.5.4, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Compare and Contrast Chart



Assessment of Standards

(student pages 109–111)

Michigan Standards for English Language Arts addressed in Assessment of Standards

RI.5.1, RI.5.2, RI.5.3, RI.5.7, RI.5.8, W.5.2b, W.5.2c

Item #	Answer	Item Standard	CCR Anchor Standard	Claim	Target	DOK	Bloom's Original/Revised
1	D	RI.5.2	CCRA.R.2	1	9	3	Comprehension/Understand
2	D	RI.5.1	CCRA.R.1	1	8	2	Comprehension/Understand
3	B	RI.5.2	CCRA.R.2	1	9	2	Comprehension/Understand
4	A,B,C	RI.5.8	CCRA.R.8	1	11	3	Comprehension/Understand
5	D	RI.5.8	CCRA.R.8	1	11	2	Analysis/Analyze
6	B	RI.5.7	CCRA.R.7	1	13	2	Analysis/Analyze
7	A	RI.5.2	CCRA.R.2	1	9	2	Comprehension/Understand
8	B	RI.5.3	CCRA.R.3	1	11	3	Comprehension/Understand
9A	D	RI.5.8	CCRA.R.8	1	11	3	Comprehension/Understand
9B	C	RI.5.8	CCRA.R.8	1	11	3	Comprehension/Understand
10	A	RI.5.7	CCRA.R.7	1	13	2	Analysis/Analyze
11	A	W.5.2c	CCRA.W.2	2	3	2	Application/Apply
12	C	W.5.2b	CCRA.W.2	2	3	2	Application/Apply
13	A	W.5.2b	CCRA.W.2	2	3	2	Application/Apply

Interventions

Focus *RI.5.3*

When formative assessments reveal students in need of intervention, use the following activities.

Intervention Activities

Select and Justify

Provide two informational texts that contain related ideas, events, or concepts. Have students refer to the selections and highlight the ideas, words, phrases, or sentences that show connections between the texts. Direct students to share responses in small groups. Have students explain how information in one text relates to or interacts with information in the other text.

(RI.5.3, RI.5.10, SL.5.1, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Topic Twins

Have students locate print or digital articles that provide information on related topics. Direct students to identify the relationships and connections between the two sources. Instruct students to use learned information to write original pieces about the related topics.

(RI.5.3, RI.5.10, W.5.2, W.5.8, W.5.9b, L.5.1, L.5.2, L.5.3, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Skillful Thinking

Skillful Thinking = Deeper Learning through Revised Bloom's Taxonomy, Depth of Knowledge, and 9 Traits of Critical Thinking
(student page 112)

The 9 *Traits of Critical Thinking*™ include *adapt*, *collaborate*, *communicate*, *create*, *examine*, *inquire*, *link*, *reflect*, and *strive*. These traits foster high-quality thinkers. On the Skillful Thinking page in each unit of the student edition, traits are selected and identified in each questioning prompt to reinforce student use of the traits in the context of English language arts. The labeling of the traits assists students in recognizing that the application of a focus trait is needed to complete the questioning prompt. The educator should note that each questioning prompt in the student edition is not limited to the identified trait since multiple critical thinking traits may be utilized by the student to successfully respond to the prompt.

Adapt – I adjust my actions and strategies to accomplish tasks.

✓ Engagement Indicator – Students examine options and alternatives to find solutions to a problem.

✓ Strategy to Facilitate the ***Adapt*** Trait – Design activities or scenarios that require students to practice flexibility and shift or change their thinking.

Answers may vary. Student responses might include: The women of Ghana might not have jobs; they might not have enough money to support their families; they might not be business owners.

(RI.5.10, W.5.2, W.5.9b, DOK: 3, Bloom's/RBT: Analysis/Analyze)

Communicate – I use clear language to express my ideas and to share information.

✓ Engagement Indicator – Students use accurate language in both oral and written forms.

✓ Strategy to Facilitate the ***Communicate*** Trait – Require students to support responses with explanations, comparisons, examples, and/or evidence.

Answers may vary. Student responses should include an answer to the question if "Handcrafted Hope" is an appropriate title for this article and an explanation for the opinion.

(RI.5.10, W.5.1, W.5.1b, W.5.9b, DOK: 3, Bloom's/RBT: Evaluation/Evaluate)

Create – I use my knowledge and imagination to express new and innovative ideas.

✓ Engagement Indicator – Students generate and seek novel solutions, techniques, and ideas.

✓ Strategy to Facilitate the ***Create*** Trait – Guide students to push beyond common thinking to thinking outside the box.

Answers may vary. Student responses should include a logo for *Global Mamas* using words and sketches.

(RI.5.10, W.5.4, W.5.9b, DOK: 3, Bloom's/RBT: Synthesis/Create)

Motivation Station

(student page 113)

Answers may vary. Student responses might include the following rules in the left column of the chart.

1. Capitalize words in titles.
2. Capitalize proper nouns.
3. Capitalize the names of holidays, product names, and geographic names.
4. Capitalize dates.
5. Capitalize the pronoun "I."

Answers may vary. Student responses should include a poem, riddle, or song that incorporates rules of capitalization in the right column of the chart.

(L.5.2, DOK: 3, Bloom's/RBT: Synthesis/Create)

Journal

(student page 113)

Answers may vary. Student responses should include a description of someone known by the student who helped others.

(W.5.3, W.5.9b, W.5.10, L.5.1, L.5.2, L.5.3, DOK: 2, Bloom's/RBT: Application/Apply)

Extended Practice Assessment

(student page 114)

The Extended Practice is an informational text with embedded procedures detailing the steps needed to make a form of batik. A cross-curricular connection for this text might focus on traditional art of other cultures.

Michigan Standards for English Language Arts addressed in Extended Practice Assessment

RI.5.1, RI.5.9

Item #	Answer	Item Standard	CCR Anchor Standard	Claim	Target	DOK	Bloom's Original/Revised
1	A	RI.5.1	CCRA.R.1	1	8	2	Comprehension/Understand
2	C	RI.5.9	CCRA.R.9	1	11	3	Analysis/Analyze
3	D	RI.5.1	CCRA.R.1	1	8	2	Comprehension/Understand
4	Open-ended						

Performance Task Assessment

Focus

RI.5.10, W.5.2, W.5.2a, W.5.2b, W.5.2c, W.5.2d, W.5.2e, W.5.4, W.5.5, W.5.6, W.5.7, W.5.8, W.5.9, W.5.10, L.5.1, L.5.2, L.5.3

Performance Task

Produce an informational web page for an original service organization. Include the following elements: Name of organization, Purpose, Services provided, Opportunities to help, Logo for the organization.

(DOK: 4, Bloom's/RBT: All)

Performance Task Steps

1. Read "Handcrafted Hope."
2. Use the Internet to study service organization web pages. Record notes about layouts, visuals, and descriptions on the web pages.
3. Brainstorm possible service organizations by considering the needs of others and your personal interests. From these ideas, create an original service organization.
4. Answer questions about your task.
   - What inspired Renae Adam and Kristin Johnson to organize Global Mamas?
   - What information from your research or personal interests influenced your service organization choice?
   - How will you design your web page to best communicate information about your service organization and to include all needed elements?
5. Plan and design your web page.

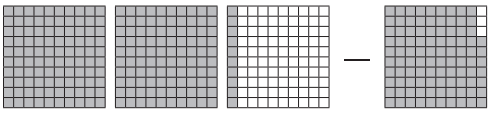
Scoring Criteria

Use a rubric with the following criteria for student self-assessment and teacher scoring: Inclusion of Elements, Organization, Originality, Language and Conventions, Visual Interest.

Name _____

Standard 5.NBT.7

1. Scott created a video presentation to show his work on his science project. The first segment of the presentation was 2.1 minutes long, and the second segment was 0.97 minute long.



First Segment — Second Segment

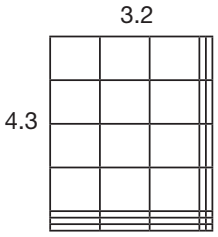
Write and solve an equation to find how many minutes longer the first segment of Scott's presentation was than the second segment.

Answer: _____

2. Parker and his family are on vacation in their motor home that travels 3.2 miles on 1 gallon of gasoline. The fuel gauge shows that the motor home has 4.3 gallons of gasoline left in the tank. Parker writes this equation to find how many more miles the motor home can travel before running out of gas.

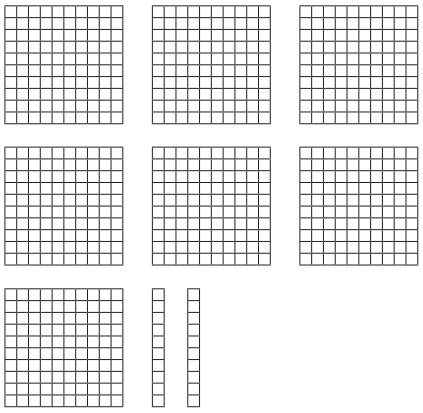
$$3.2 \times 4.3 = \square$$

Use the area model to find the product of Parker's equation.



Answer: _____

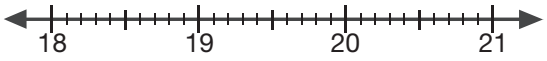
3. Annabeth has 7.2 cups of cookie batter, represented by this model.



If each cookie uses 0.45 cup of batter, how many cookies can Annabeth make?

Answer: _____

4. Mr. Pete pumped 18.6 gallons of gasoline into his car and then bought 2.3 gallons of gasoline for his lawn mower. Write an equation to find the number of gallons of gasoline Mr. Pete purchased. Use the number line to solve your equation.



Answer: _____

Words for the Wise

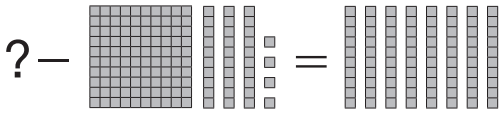
addend	dividend	product
decimal number	divisor	quotient
decimal point	factor	sum
difference	hundredth	tenth

Name _____

Unit 10 Partner Practice

Standard 5.NBT.7

1. Four students found the missing decimal number in this equation.



The answers are shown here.

Student	Answer
Abby	0.54
Brian	1.14
Carter	1.41
Dennis	2.14

Which student solved the equation correctly?

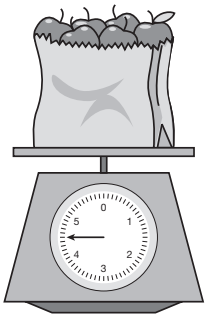
A Abby

B Brian

C Carter

D Dennis

2. Missy bought 4.5 pounds of apples. She used 2.8 pounds of apples to make a pie and the remaining apples to make a fruit salad. How many pounds of apples did Missy use in the fruit salad?



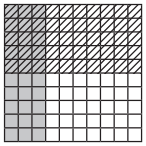
A 12.6 lb

B 7.3 lb

C 2.3 lb

D 1.7 lb

3. Which equation does this model show?



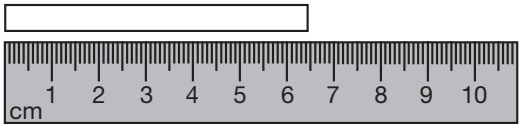
A $0.5 \times 0.3 = 0.15$

B $0.1 \times 0.7 = 0.07$

C $0.5 \times 0.5 = 0.25$

D $0.05 \times 0.03 = 0.015$

4. Benita has a strip of paper 6.5 centimeters long. She cuts the paper into 0.5 centimeter sections in order to make tiles for a mosaic. How many tiles does Benita cut?



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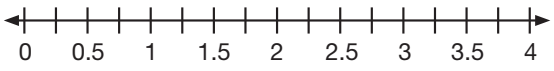
A 1.3

B 7

C 13

D 15

5. Stephen and Nathan made a banner for the school play. The banner contains 0.75 meter of white fabric, 1.5 meters of red fabric, and 1.25 meters of blue fabric. Use the number line to show the fabric used for the banner.



Which shows the total length of white, red, and blue fabric used in the banner?

A 2.15 m

B 3.5 m

C 3.55 m

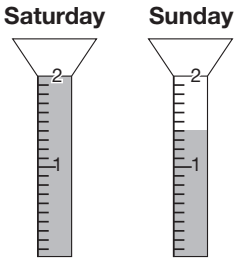
D 4 m

Name _____

Standard 5.NBT.7

Unit 10 Independent Practice

1. Hank's rain gauge showed that 2 inches of rain fell on Saturday. On Sunday, Hank checked his rain gauge again and found that 1.4 inches of rain had fallen that day.



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Choose the equation Hank can use to find how many more inches of rain fell on Saturday than on Sunday.

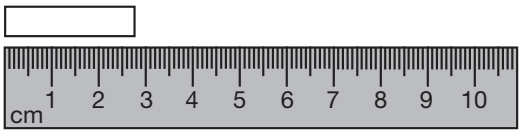
A $2 - 0.4 = 0.6$

B $2 + 1.4 = 3.4$

C $2 - 1.4 = 1.2$

D $2 - 1.4 = 0.6$

2. Anna broke a stick of gum into pieces that were 2.8 centimeters long. The stick of gum was long enough to break into 2.5 pieces. How many centimeters long was the original stick of gum?



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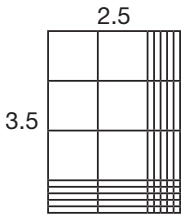
A 1.12 cm

B 5.3 cm

C 7 cm

D 70 cm

3. Sue runs a lap around the track in 2.5 minutes. Sue drew this model to help predict how long it would take to run 3.5 laps at the same rate.



Which shows the number of minutes it will take Sue to run the laps?

A 87.5 min

B 8.75 min

C 8.25 min

D 7.0 min

4. Ms. Ponce wants to plant 4.2 acres of peach trees in the field behind her house, as represented on the number line.

She plants 0.6 acre per day. How many days will it take Ms. Ponce to finish planting the trees?

A 4.8 days

B 5 days

C 7 days

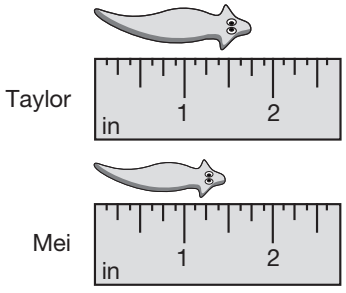
D 25 days

Name _____

Unit 10 Assessment

Standard 5.NBT.7

1. Ms. Ogden's class measures flatworms. Taylor measures a worm that is 1.75 inches long, and Mei measures a worm that is 1.5 inches long.



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Taylor and Mei write this equation to find the combined length, in inches, of their worms.

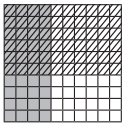
$$1.75 + 1.5 = \square$$

What digit is in the tenths place in the sum?

A 0 C 5

B 2 D 9

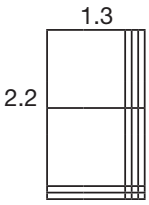
2. Which equation does the decimal model show?



A $0.6 \times 0.4 = 2.4$ C $0.6 \times 0.4 = 0.24$

B $0.4 \times 0.4 = 0.16$ D $0.04 \times 0.06 = 0.24$

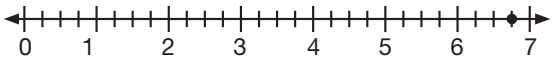
3. Mr. Cox's tractor can travel 1 mile on 1.3 gallons of gasoline. He must drive his tractor 2.2 miles to plow his field. The expression 2.2×1.3 represents the number of gallons of gasoline Mr. Cox will use to plow his field. Use the area model to find the value of the expression.



A 0.9 gal C 3.5 gal

B 2.86 gal D 28.6 gal

4. Reginald heard that 6.75 centimeters of rain fell in 0.75 hour. He wants to use this number line to find the average rainfall, in centimeters, in one hour.



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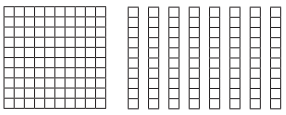
Which will help Reginald solve his problem?

A $6.75 \div 0.75 = 7.5$ C $6.75 \div 0.75 = 9$

B $0.75 \div 6.75 = 5$ D $6.75 - 0.75 = 6$

5. Rosemary has 1.8 pounds of cat food as represented in the model. Her cat eats 0.36 pound of food each day. Write and solve an equation to find the number of days Rosemary's cat food will last.

Answer: _____



Explain how you found your answer.

_____

_____

Name _____

Standard 5.NBT.7

1. Which is greater? Circle your answer.

$4 \div 0.5$ or $0.5 \div 4$

Explain your answer.

_____

_____

_____

2. Write a word problem in which the product is 2.4.

_____

_____

_____

_____

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Draw a picture that models your problem.

Journal

Some students believe that dividing with decimals can be tricky. Write two tips that are helpful when dividing with decimals.

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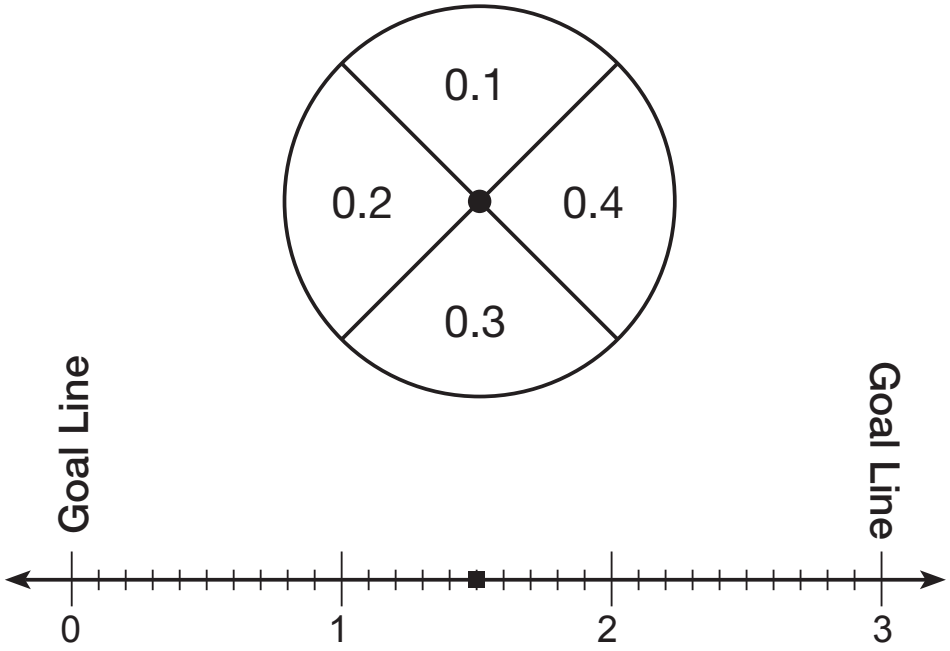
Name _____

Unit 10 Motivation Station

Standard 5.NBT.7

Decimal Goal Line

Play "Decimal Goal Line" with a partner. The object of the game is to move a game token across the other player's goal line. Each pair needs a small game token, such as a centimeter cube, and a paper clip to use with a pencil on the spinner. Determine who will spin first, then place the game token on the square at 1.5 on the number line. Player 1 spins the spinner. The number spun tells how many tenths the player may move toward the opponent's goal line. The player states the starting location, the size of the move, and the ending location. For example, "I am starting on 1.6, moving 0.3, and ending at 1.9." If a player incorrectly states the result of the move, the player remains on the previous location. Play then passes to Player 2 who repeats this process and moves the token in the opposite direction, again stating the starting point, the size of the move, and the ending point. Play continues until the teacher calls time or until one player crosses the other player's goal line.



Parent Activities

1. Using a rain gauge, have your child add the rain totals over a period of time, paying close attention to tenths and hundredths.
2. Have your child choose items from a catalog and add the prices to get as close as possible to a total of $5, $10, etc.
3. Give your child several quarters, dimes, or nickels. Have your child write the value of each coin as a decimal and multiply the decimal amount by the number of coins to find the total value.
4. Using several quarters, dimes, or nickels, calculate the value of the coins, but do not show the coins to your child. Ask a question such as "I have some quarters. The total value is $2.25. How many quarters do I have?" Your child can solve by dividing the total by the value of one coin.