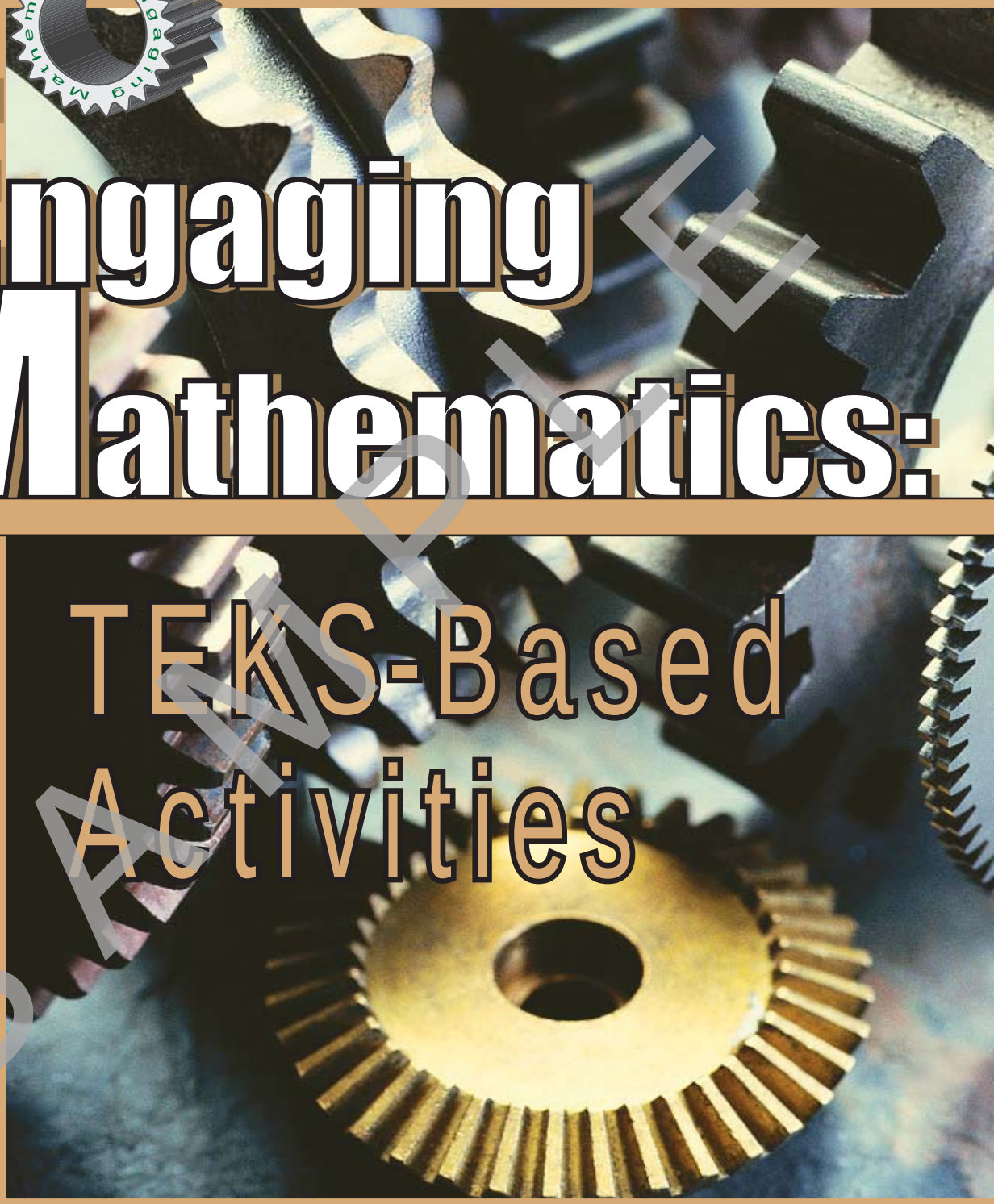
Engaging Mathematics:



TEKS-Based Activities

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Grade 2

region 4®
Educated Solutions

Engaging Mathematics: TEKS-Based Activities, Grade 2

Teacher Edition

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The Region 4 Education Service Center (Region 4) supports student achievement by providing educational products and services that focus on Excellence, Service, and Children. We create and conduct professional development institutes, produce research-based instructional materials, and provide technical assistance to strengthen educational systems to promote the academic success of all students.

Engaging Mathematics: TEKS-Based Activities, Grade 2
Teacher Edition
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Representing Values

Activity Objective:
I can model a number in different ways using base ten blocks.

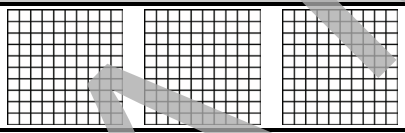
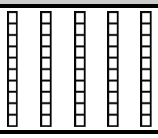
Materials:
- **Representing Values Activity Page (Pages 1–2)**
- Base ten blocks

Possible Facilitation Questions:
- In the number 352, what digit is in the hundreds place?
  Possible response: The digit 3 is in the hundreds place.
- What is the value of that many hundreds?
  Possible response: The value of that many hundreds is 300.
- How many hundreds (flats) do you need in order to represent that value?
  Possible response: I need three of the hundreds (flats) to represent the value 300.
- How many tens (rods) does it take to equal the value of one hundred (flat)?
  Possible response: It takes 10 tens (rods) to represent the value of 1 hundred (flat).
- How many ones (units) does it take to equal the value of 1 ten (rod)?
  Possible response: It takes 10 ones (units) to equal the value of 1 ten (rod).

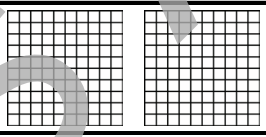
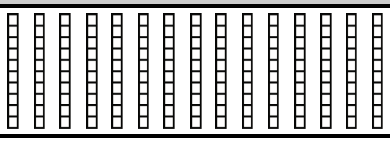
Answer:

Responses may vary. Possible responses include:

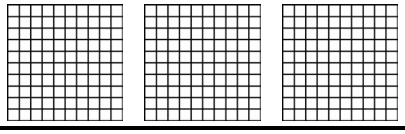
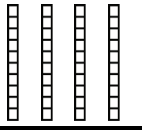
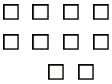
352

Hundreds	Tens	Ones
		
Hundreds Value: *300*	**Tens Value:** *50*	**Ones Value:** *2*

352

Hundreds	Tens	Ones
		
Hundreds Value: *200*	**Tens Value:** *150*	**Ones Value:** *2*

352

Hundreds	Tens	Ones
		
Hundreds Value: *300*	**Tens Value:** *40*	**Ones Value:** *12*

SAMPLE

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Student Name: _____ Date: _____

Representing Values Activity Page (Page 1)

- Use base ten blocks to represent the three-digit number in **My Workspace**.
- Record a picture of your representation in **My Workspace**.
- Regroup some of the base ten blocks to create a different representation of the three-digit number in **My Workspace** on **Page 2**.
- Record a picture of your new representation in **My Workspace**.
- Repeat the process to complete the last table on **Page 2**.

My Workspace

352

Hundreds	Tens	Ones
Hundreds Value:	**Tens Value:**	**Ones Value:**

SAMPLE

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Student Name: _____ Date: _____

Representing Values Activity Page (Page 2)

352

Hundreds	Tens	Ones
Hundreds Value:	**Tens Value:**	**Ones Value:**

352

Hundreds	Tens	Ones
Hundreds Value:	**Tens Value:**	**Ones Value:**

SAMPLE

Communicating about Mathematics

How can 352 be represented in three different ways? Explain your thinking.

_____

_____

_____

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Brownies for Sale!

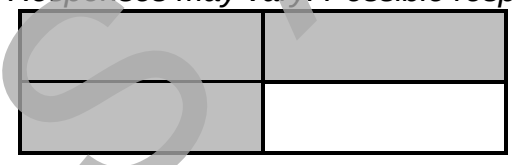
Activity Objective:
I can use fractions to describe a part.

Materials:
- **Brownies for Sale! Activity Page**
- Index card
- Glue or tape

Possible Facilitation Questions:
- What do you understand about the problem situation?
  Responses may vary. Possible response: I understand that Vera sliced the pan of brownies into four equal parts and she sold three of those brownies (parts) at the carnival.
- How many brownies did Vera sell? How many sections of the index card do you need to color to show the number of brownies that Vera sold?
  Possible response: Vera sold three brownies. I could color three sections of the index card to show the number of brownies (parts) that Vera sold.
- How many brownies were there in all? Where does that number go on a fraction?
  Possible response: There were four brownies in all. The bottom number of a fraction represents the total number of brownies in the pan.
- How many brownies did Vera not sell? Where does that number go on a fraction?
  Possible response: Vera sold three of the four brownies. I could put a one as the top number of the fraction to represent the brownies (parts) that Vera did not sell.

Answer:

Responses may vary. Possible response includes:



$\frac{1}{4}$ *of the brownies were not sold.*

SAMPLE

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Student Name: _____ Date: _____

Brownies for Sale! Activity Page

Vera sliced a pan of brownies into 4 smaller, equal-sized brownies to sell at her school's carnival. At the carnival, Vera sold 3 of the brownies.

- Fold an index card to represent the total number of brownies that Vera cut.
- Shade the index card to represent the number of brownies Vera sold at the carnival.
- Glue or tape the index card in **My Workspace**.
- Use a fraction to describe the amount of the pan of brownies that Vera did **NOT** sell.

My Workspace

SAMPLE

Communicating about Mathematics

How would your model change if Vera cut the pan of brownies into 8 equal pieces?

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Ms. Velarde's Stickers

Activity Objective:
I can solve problems using the problem-solving model.

Materials:
- **Ms. Velarde's Stickers Activity Page**

Possible Facilitation Questions:
- What does the 25 mean in the problem?
  Responses may vary. Possible response: The number of stickers on each sheet of stickers.
- What does the 2 mean in the problem?
  Responses may vary. Possible response: The number of sheets of stickers Ms. Velarde had.
- How are the 25 and the 2 related?
  Possible response: There are two sheets of stickers and each sheet has 25 stickers on them.
- How are the total number of stickers and the 15 related?
  Possible response: There are 50 stickers altogether and Ms. Velarde has used 15 of them.

Answer:

Responses may vary for the problem-solving model.
35 stickers

SAMPLE

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Student Name: _____ Date: _____

Ms. Velarde's Stickers Activity Page

Ms. Velarde had 2 sheets of stickers. Each sheet had 25 stickers. She used 15 stickers for her students' class work. How many stickers does Ms. Velarde have left?

My Workspace

What do I know? What do I need to know?
To solve this problem, I need to . . .
Here is my work and my answer.

SAMPLE

Communicating about Mathematics

How could you prove that your answer is reasonable?

_____

_____

_____

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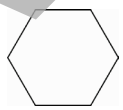
What Am I?

Activity Objective:
I can identify two-dimensional figures.

Materials:
- **What Am I? Activity Page**
- **What Am I? Activity Master**
- Scissors
- Glue or tape

Possible Facilitation Questions:
- What is a side?
  Responses may vary. Possible response: A side is any of the line segments that form a polygon.
- What is a vertex?
  Responses may vary. Possible response: A vertex is the point at which two sides of a figure intersect.

Answer:

What Am I?		
I am a figure with 3 equal sides and 3 vertices.		***Triangle***
I am a figure with 4 equal sides.		***Rhombus***
I am a figure with more than 4 vertices, but less than 8 vertices.		***Hexagon***
I am a figure with 4 sides and 4 vertices.		***Rectangle***

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Student Name: _____ Date: _____

What Am I? Activity Page

- Cut apart the cards on the **What Am I? Activity Master**.
- Match each picture of the two-dimensional figures and the names of each figure with its description.
- Glue or tape the matched cards in **My Workspace**.

My Workspace

What Am I?		
I am a figure with 3 equal sides and 3 vertices.	Picture Card	Word Card
I am a figure with 4 equal sides.	Picture Card	Word Card
I am a figure with more than 4 vertices, but less than 8 vertices.	Picture Card	Word Card
I am a figure with 4 sides and 4 vertices.	Picture Card	Word Card

SAMPLE

Communicating about Mathematics

How are the pictures of the two triangles similar? How are they different?

_____

_____

_____

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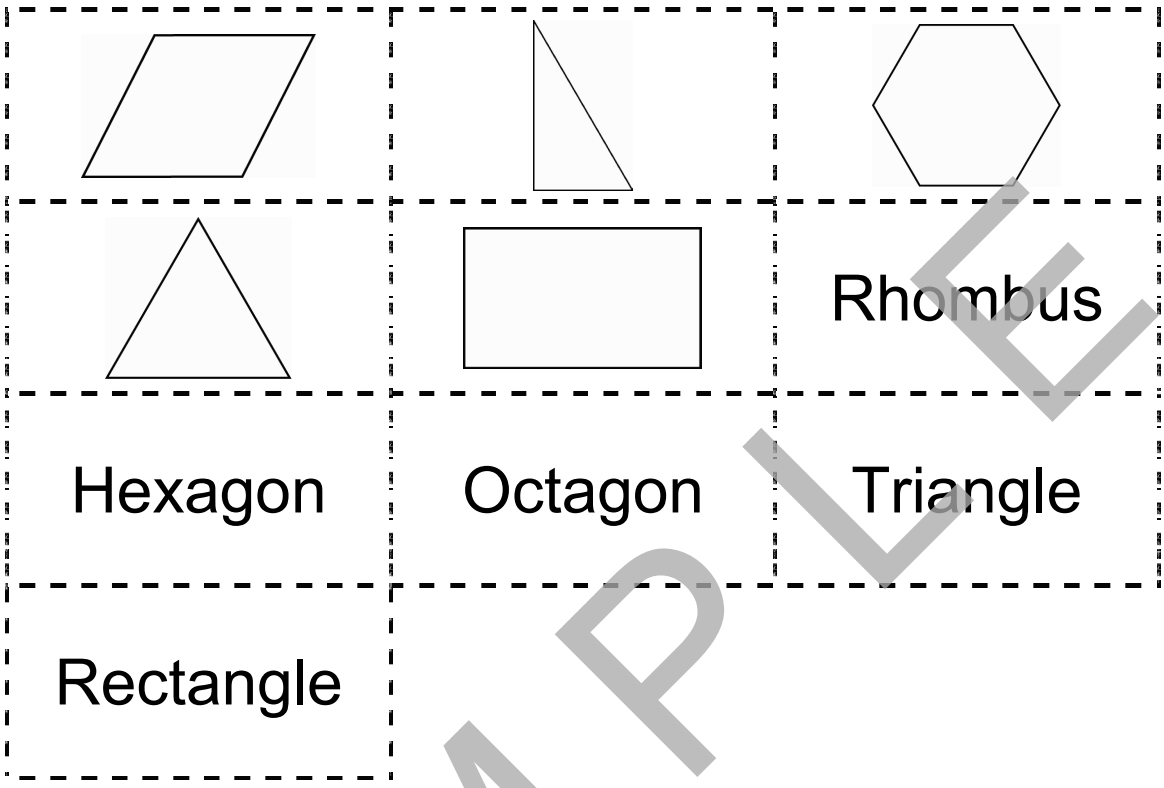
Student Name: _____ Date: _____

What Am I? Activity Master



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Ron and Laura

Activity Objective:
I can measure the area of a rectangle.

Materials:
- **Ron and Laura Activity Page**

Possible Facilitation Questions:
- What do you know about area?
  Responses may vary. Possible response: I know that area is the amount of space something covers.
- How are the two pictures similar? How are they different?
  Responses may vary. Possible response: Both pictures show square units covering the rectangle. One picture shows the entire rectangle covered with square units. The other picture shows part of the rectangle covered with square units.

Answer:

Responses may vary. Possible response:
Ron measured the rectangle correctly because he used square units to measure all of the space that the rectangle covers. Laura did not measure the entire rectangle.

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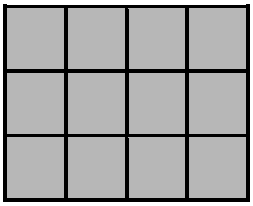
Student Name: _____ Date: _____

Ron and Laura Activity Page

Journal Prompt:

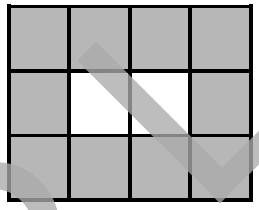
- Ron and Laura both measured the area of the same rectangle.
- Who correctly measured the area of the rectangle? Explain your thinking.

Ron



12 square units

Laura



10 square units

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