Explore Section Resources

5.1

PLAN

Graphic Organizers ◇ ◈ ◆ ELL
Lesson Plans
Math Tool Paper ◇ ◈ ◆ ELL
Pacing Guide

TEACH

Answer Presentation Tool
Differentiating the Lesson
- Learning Profile ◈

Digital Examples ◇ ◈
- Spanish audio ELL

Dynamic Classroom ◇ ◈ ◆
- Spanish audio ELL

English Language Learner Support ELL
Game Library ◇ ◈ ◆
- Spanish audio ELL

Interactive Tools ◇ ◈ ◆ ELL
Multi-Language Glossary ◇ ◈ ◆ ELL
Newton & Descartes's Math Musicals ◇ ◈ ◆ ELL
- Differentiated Rich Math Tasks ◇ ◈ ◆

Resources by Chapter
- Warm-Up ◇ ◈ ◆
- Extra Practice ◇ ◈ ELL
- Reteach ◇ ELL
- Enrichment and Extension ◆

Skills Trainer ◇ ◈ ELL
Vocabulary Flash Cards ◇ ◈ ◆ ELL

Key: ◇ = emerging ◈ = proficient ◆ = advanced
ELL = English Language Learners

ASSESS

Dynamic Assessment System
- Practice ◇ ◈ ◆
- Assessments ◇ ◈ ◆
- Point-of-use Remediation ◇ ◈ ELL
- Reports ◇ ◈ ◆

Formative Check ◇ ◈ ◆
Homework App ◇ ◈ ◆
Practice Workbook
- Review & Refresh ◇ ◈ ◆
- Evidence-Based Scale Worksheets ◇ ◈ ◆

Self-Assessment ◇ ◈ ◆

Formative Check

Formative Check in the Dynamic Classroom allows you to:

- See real-time data to gauge class and individual performance
- Navigate through student responses with the ability to hide student information when presenting

5.1 Partner Numbers to 5

Learning Target:

Use partner numbers to show numbers to 5.

Success Criteria:

- Name each part.
- Name the whole.
- Name the partner numbers for a whole.

FOCUS on Major Work

Students show different ways to make 5 to explore adding two whole numbers from 0 to 5.

RIGOR in the Lesson

- ***Conceptual Understanding***
  Students use counters to explore parts and wholes.
- ***Procedural Fluency***
  Students become fluent in using partner numbers to show numbers to 5.
- ***Application***

  Selected Examples:

  - Conceptual application
    Exercise 2, page 223
  - Real-life application
    Exercise 5, page 226

Florida Benchmarks

Number Sense and Operations
MA.K.NSO.3.1: Explore addition of two whole numbers from 0 to 10, and related subtraction facts.

Algebraic Reasoning
MA.K.AR.1.2: Given a number from 0 to 10, find the different ways it can be represented as the sum of two numbers.

Laurie's Notes

Math Overview

Students may be able to count a group of five objects and understand the counting sequence, but that does not mean they know that five can be thought of as having two or more parts. The part-part-whole relationship is very important in developing number sense and beginning addition concepts. In this section, students identify the whole and the parts that make up the whole for numbers to 5. Students conceptually subitize when they see two smaller groups within a group. Once students can visualize the parts and the whole, they can identify all the partner numbers that are embedded within a number.

Materials

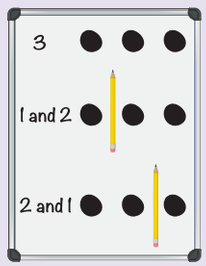
- two-color counters
- Part-Part-Whole mat*

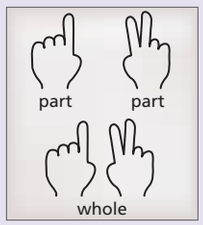
**Found in the Instructional Resources*

Dig In

Goal: Explore partner numbers for 3.

- Draw a row of three dots on a chart or the board. Have students tell how many dots they see. They use this to explore partner numbers for 3.
- Place a pencil or popsicle stick between the first and second dots. Have students identify the number of dots on each side of the stick.
- "The numbers 1 and 2 were hidden inside the number 3!" Relate the terms *parts* and *whole* to the demonstration. "One and two are parts, and three is the whole."
- Continue moving the stick between the different dots as students identify the parts as you add the partner numbers for 3 to the anchor chart. Be sure to include combinations with 0.
- Repeat the steps for the number 2.
- You can have students use their fingers to show the different sets of partner numbers.





- In this activity, students have been introduced to the three success criteria.

Laurie's Notes

Explore Overview

Goal: Use counters to explore and explain partner numbers.

- Pass out two-color counters. Have students put three counters in their hands, shake, and then drop the counters in the box.
- "Move your counters to the frame with three boxes."
- Discuss how many counters show red, how many show yellow, and how many counters they dropped. Listen to conversations to gauge students' understanding of parts and whole. These are partner numbers for 3.

Repeat the process using four and five counters. Make sure they place the red and yellow counters in the frames and identify the parts for each whole.

Extension

"Are there more or less different pairs of partner numbers as your whole number gets bigger? Why do you think that happens?"

Name _____

Learning Target: Use partner numbers to show numbers to 5.

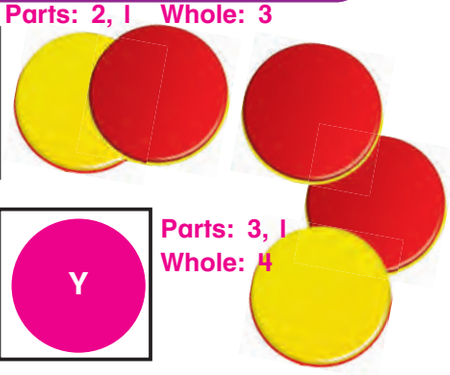
5.1 Partner Numbers to 5

Explore

Sample answers:

R	R	Y		
R	R	R	Y	
R	Y	Y	Y	Y

Parts: 2, 1 Whole: 3



Parts: 3, 1
Whole: 4

Parts: 1, 4
Whole: 5

Directions: Drop 3 two-color counters in the purple box. Move the counters to the correct frame. Name the parts and the whole. Repeat this process using 4 and 5 counters.

Number Sense and Operations
MA.K.NSO.3.1: Explore addition of two whole numbers from 0 to 10, and related subtraction facts.
Algebraic Reasoning
MA.K.AR.1.2: Given a number from 0 to 10, find the different ways it can be represented as the sum of two numbers.

GO DIGITAL

Where Are We In Our Learning?

Ask partners to share their partner numbers for the wholes, 4 and 5. Have volunteers share theirs with the class so that all hear the different number combinations that are possible.

5.1

Laurie's Notes

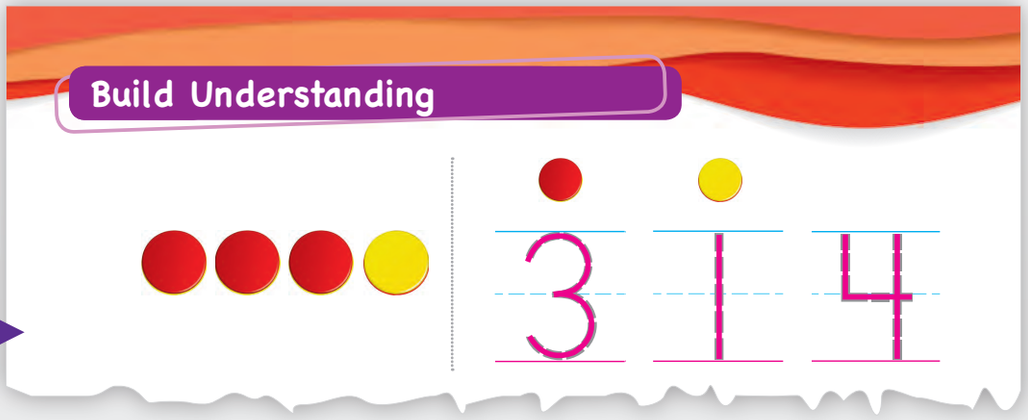
Preparing to Teach

- Introduce the vocabulary cards for **whole**, **part**, and **partner numbers**. Students may think of parts of a bicycle, orange, or toy set. Refer to the model of 3 (the whole) that had the numbers 1 and 2 (parts) hidden in it. One and two are partner numbers for the whole three.
- Remind students that you want to hear them use these words as they work with their partners in this lesson.

Teaching Notes

- Students count and write the numbers for the parts and the whole.
- **Model:** "Tell your partner what you notice about the counters." Listen for four counters, three are red and one is yellow. Students record the number of each color (parts) and the total (whole).
- 5 MTR **Structure:** You want students to recognize that there are other partner numbers for 4. The two-color counters suggest partner numbers 3 and 1. Return to the number 4 later. Do students understand that 2 and 2 are also partner numbers for 4?
- **Extension:** Expect some students to recognize the order of 3 and 1 or 4 and 0 can be reversed in terms of color. Although it is not taught in Kindergarten, some students may make the connection to the Commutative Property.

Page 222 in the Student Edition



5 MTR Structure

"What other partner numbers are there for 4?"

Laurie's Notes

- In the last exercise, students may be confused because there are no gray dolphins to count. Explain that zero can be a partner number.
- **Supporting Learners:** Students may try to compare the quantities of each part. Make sure students understand they are identifying the parts and the whole.

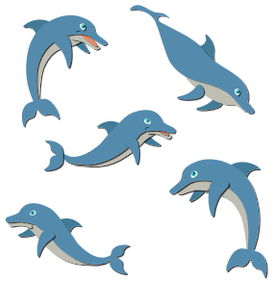
Fluency

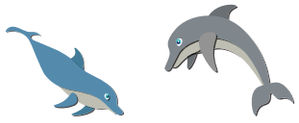
Students prepare for fluency with addition and subtraction by developing conceptual subitizing with numbers to 5.

Extension

"You see a group of five red counters. What hidden partner numbers do you see?" 1 and 4, 2 and 3, 0 and 5

1 2 3





5 0 5

Directions: Count each type of object. Write each number. Count all the objects. Write the number for the whole.

222 two hundred twenty-two

GO DIGITAL

Where Are We In Our Learning?

As students are working on the exercises, continue to refer to the success criteria. "There are three butterflies. The *whole* is 3. There is one purple butterfly and there are two orange butterflies. The *parts* are 1 and 2, and 1 and 2 are partner numbers for 3."

English Language Learner Support ELL

Vocabulary Review

Explain that the word *whole* means "all of the group" when referring to groups that are being counted. Students may be familiar with the word *hole*, which means an empty space. The word *part* refers to only some of the things in the group, not the whole group. Students may be familiar with car parts or toy parts.

Leveled Proficiency Comprehension

Review the names of animals shown on the page, as necessary. Have students work in groups to practice language as they complete the Build Understanding example and the exercises. Have one student ask the other questions, such as, "How many purple butterflies are there? How many total butterflies are there?" Then, have them switch roles, using the words *blue dolphins* and *gray dolphins*.

Beginner: Students may answer using only numbers, such as, "one."

Intermediate: Students may answer with a number and the object being counted, such as, "one purple butterfly."

Advanced: Students may answer with a sentence, such as, "There is one purple butterfly and two orange butterflies."

5.1

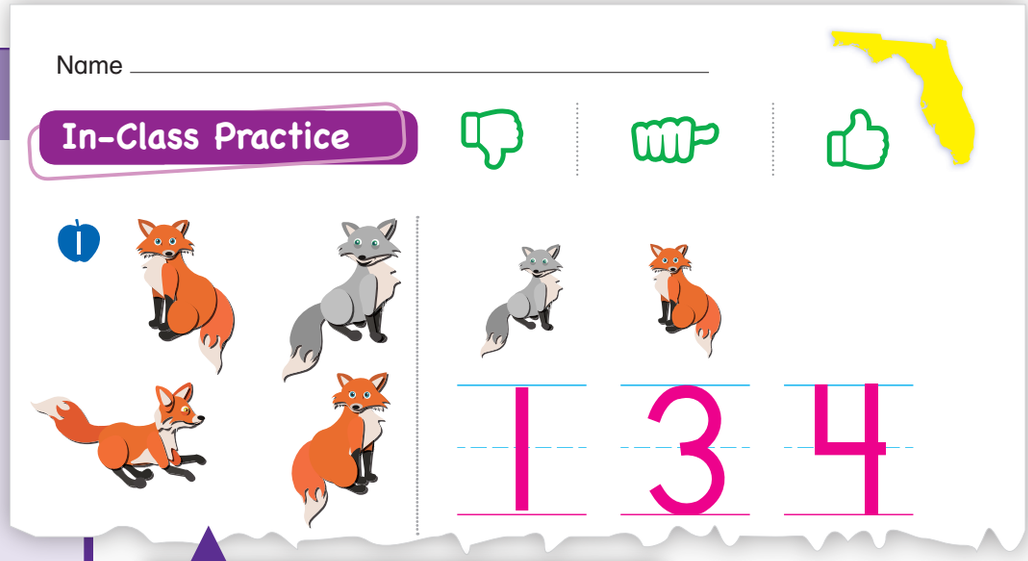
Page 223 in the Student Edition

Laurie's Notes

Scaffolding Instruction: This section of Laurie's Notes changes in this chapter to reflect students' increased number sense development. It also responds to needed scaffolding for students as they interact with the content. Support and extensions are now offered for targeted exercises.

Supporting Learners

- Provide each student with the Part-Part-Whole Mat Instructional Resource to use with counters as they work on each exercise.
- Have students work with five frames and two-color counters to find the partner numbers that make 5.



Teaching Tip

Have partners work on Exercise 1 together before doing the others independently. Remind them that the last column is for the total number of animals in each group – the 'whole'.

Scaffolding for All Learners

Scaffold instruction to support all students in their learning. Learning is individualized and students may move in and out of these levels with each skill and concept. Student self-assessment and feedback help guide your instructional decisions about how to layer support.

ELL Refer to the Explore Section Resources for more resources available to support all students.

EMERGING

Students may have difficulty with identifying part-part-whole relationships or understanding that there are different partner numbers for a given number.

? **Exercises 1–3:** "What hidden partner numbers are easy to see on the page? The hidden numbers are the *parts* of the *whole* collection of objects."

- **Exercises 1–3:** Review how to find each part that makes up the whole by using two-color counters to place over the animals. Use the red side of the counters for one kind of animal and the yellow side of the counters for the other.

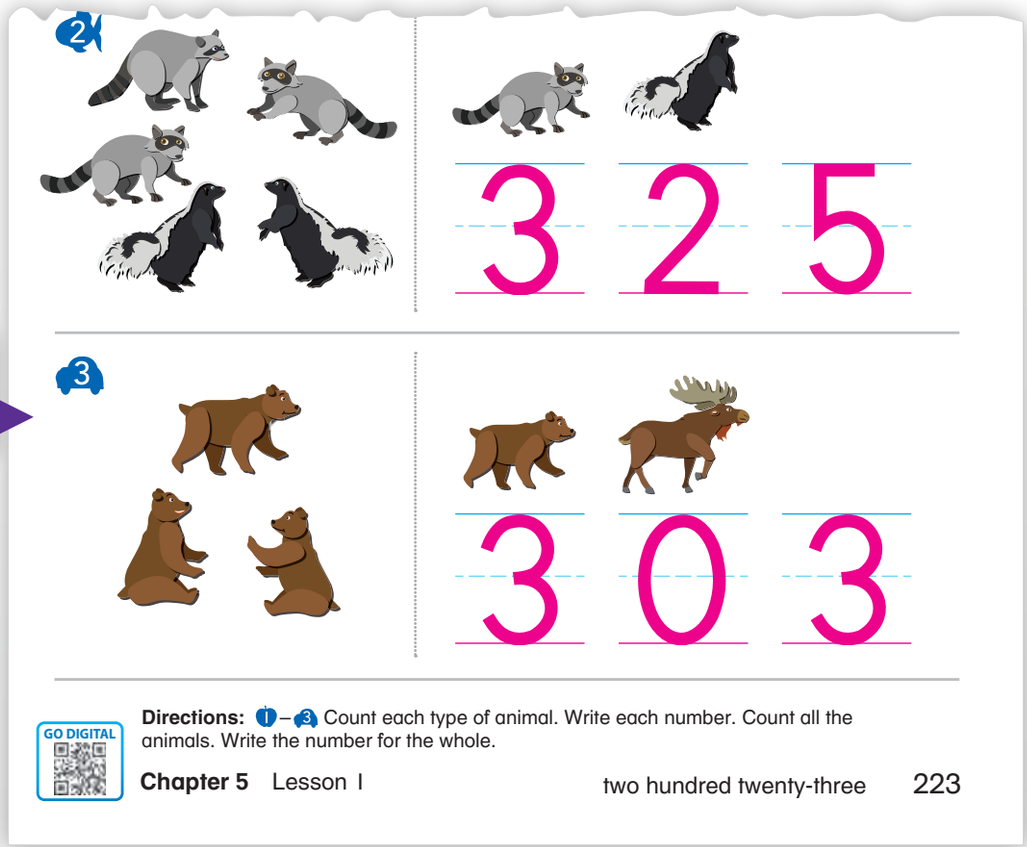
Resources Available:

- Resources by Chapter
  - Extra Practice, *pp.* 197–198
  - Reteach, *p.* 199

For students who struggle with Exercise 3 due to the lack of moose– ask them what number represents none.

Where Are We In Our Learning?

Have students choose a number from 2–5 and ask their partners to shake their counters and place the red and yellow counters on a Part-Part-Whole mat and describe the two parts for the named whole. Have them say "__ and __ are partners for __".



PROFICIENT

Students are able to use partner numbers to identify part-part-whole relationships for numbers to 5.

- The exercises on this page model the problems on the previous page.
- ? **Exercises 1–3:** "How can you group the objects to show a different set of partner numbers?"

Resources Available:

- Differentiating the Lesson
  - 5.1 Learning Profile
- Resources by Chapter
  - Extra Practice, *pp.* 197–198

ADVANCED

Students are able to use partner numbers to identify part-part-whole relationships for numbers to 5 and are fluent in finding more than one way to exhibit that whole number.

- **Extension:** Play "Counter Drop." Have partners lay a sheet of paper on the floor. Have one student turn around while the other student drops five counters above the paper. This student announces the number of counters dropped and the number of counters that land on the paper. The other student must name the number of counters that did not land on the paper. Then have students look at the counters and say, "__ and __ are partner numbers for five. Five is the whole."

Resources Available:

- Resources by Chapter
  - Enrichment and Extension, *p.* 200

5.1

Laurie's Notes

Model Real Life Overview

This application allows students to show their understanding of partner numbers to 5. Students use their understanding of part and whole to show different sets of partner numbers.

Supporting Learners

- Students can use counters to practice the different partner numbers for numbers to 5.
- Some students may be able to visualize the different partner numbers for a whole. Have students verbalize their method of finding partner numbers, as others may benefit from hearing alternative methods.

5 MTR Structure

Students draw and write two different sets of partner numbers for five. Ask, "Is there more than one way to make the number 5? How do you know?"

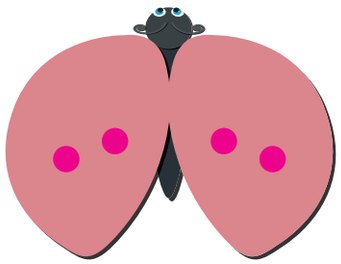
Extension

"What are two sets of partner numbers for 2?" 1 and 1; 2 and 0

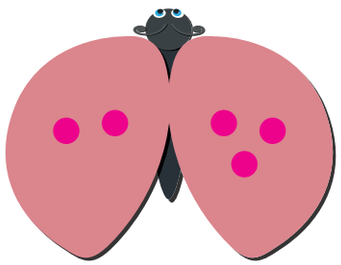
Page 224 in the Student Edition

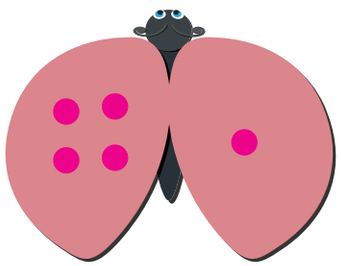
Model Real Life

Sample answer:

2  2

Sample answer:

2  3

4  1

Directions:

- Show one way to draw 4 spots on the ladybug. Write the number of spots on each wing.
- Show two ways to draw 5 spots on the ladybug. Write the number of spots on each wing.

GO DIGITAL

Solving the Model Real Life Example

Laurie's Notes

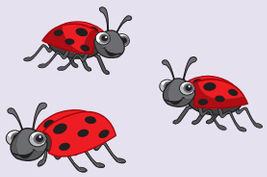
Problem Solving for All Learners

The goal for all students is to feel comfortable with the problem-solving plan. It is important for students to problem-solve in class, where they may receive support from you and their peers. Keep in mind that some students may only be ready for the first step.

- **Plan and Solve:** The following notes will help you discuss this problem with students.

? **Preview:** "Have you ever seen a ladybug before?" Allow students to share their experiences with the class. Listen for knowledge of spots on a ladybug.

? **Think Time:** "How can you draw four spots on the two wings of a ladybug?" Once students have thought about their response, they should draw the spots.



- **Common Error:** Watch for students who draw four spots on each wing. Remind them the ladybug has only four dots. Four is the whole. What are partner numbers for four?

- **Turn and Talk:** Have partners use their ladybugs to name the parts and the whole. Listen for the language of partner numbers.

Where Are We In Our Learning?

Choose several students to share their partner numbers. Refer to the anchor chart to review the different sets of partner numbers for 4. Also have students use their thumb signals to show how confident they are in knowing what parts, whole, and partner numbers are.

Closure

Choose one student to name a number from 1 to 5. Have the remaining students use their fingers to show a set of partner numbers that makes the whole. Students can show and discuss the various partner numbers for each whole.

5.1 Connect and Extend Learning

Check out the Dynamic Assessment System at *BigIdeasMath.com*.

Learning Target:

Use partner numbers to show numbers to 5.

Success Criteria:

- Name each part.
- Name the whole.
- Name the partner numbers for a whole.

Practice Notes

- Provide student with counters as additional support, if needed.

Assignment Guide

Exercise	Emerging	Proficient	Advanced	DOK 1	DOK 2	DOK 3
1	●	●	●	●		
2	□	●	●	●		
3	●	□	●	●		
4	●	●	□	●		
5	□	□	□		●	

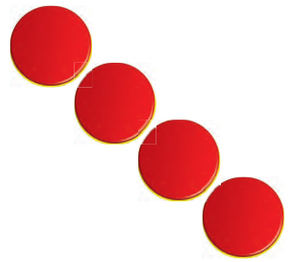
- Use the results from the □ exercises to provide differentiated support for all learners.

Name _____

Learning Target: Use partner numbers to show numbers to 5.

5.1 Practice

Example



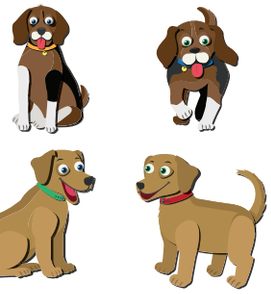
4 0 4

Directions: Count each type of object. Write each number. Count all the objects. Write the number for the whole.

1

1 1 2

2



2 2 4

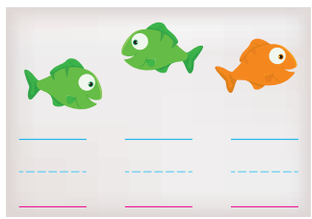
GO DIGITAL

Directions: 1 and 2 Count each type of object. Write each number. Count all the objects. Write the number for the whole.

Cross-Curricular Connections

Language Arts

Fish Eyes: A Book You Can Count On by Lois Ehlert; Read the book aloud up to the page that says: "4 striped fish plus me makes 5." (You will finish the book later in the chapter.) Have students create their own "Fish Number Book." Give each student 2 pieces of paper. Students draw partner numbers for 2, 3, 4, and 5, one pair on each side of the papers. Have students create a cover for their "Fish Number Book."



Extend Student Learning

Interpersonal

Play "5 Matching Game". Each pair of students needs a set of matching cards. (Create a card that has 1 object, such as 1 star. Create another card that has 4 stars. That makes one pair of matching cards. Make several of these pairs of cards that equal 5 objects.) Shuffle and place the cards face down in two equal rows. Partner A turns over two cards. When the total of the objects on both cards is 5, Partner A collects both cards. When the total of the objects is not 5, Partner A turns them back over. Repeat for Partner B.

Variation: Provide each partner with 5 counters to help them determine the missing part.

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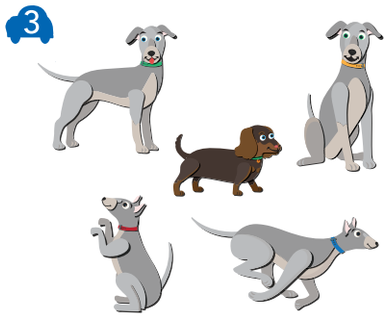
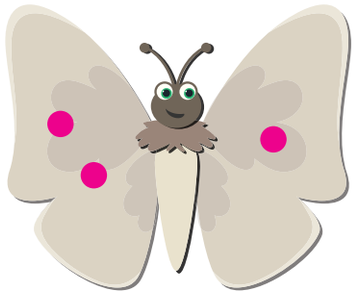


4 1 5

2 0 2

5 *Sample answer:*

2



1

Directions: 3 and 4 Count each type of dog. Write each number. Count all the dogs. Write the number for the whole. 5 Show one way to draw 3 spots on the moth. Write the number of spots on each wing.

GO DIGITAL

226 two hundred twenty-six

Students may have difficulty with the number zero. Monitor them as they work on this exercise that involves zero.

Use the results from the selected problems to provide differentiated support for all learners.

ASSESS and DIFFERENTIATE

Differentiating the Lesson
- Learning Profile ◈

Dynamic Assessment System
- Practice ◇ ◈ ◆
- Assessments ◇ ◈ ◆
- Point-of-use Remediation ◇ ELL
- Reports ◇ ◈ ◆

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Formative Check

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