



Answering the Right Question—Whole Numbers



Purpose A typical student mistake when solving word problems is that students do the arithmetic right but answer the wrong question. To address this, 5.O.3 Ramp Up has two parts. In the first part, the students and teacher work together to understand the context of a problem and then write questions that could be answered about the context. In the second part, students work together to understand the problem context and then answer different questions about it. This kind of activity helps students focus on the question so that they can be sure they answer the question that the problem is asking.

About the Problems: 5.O.3 Ramp Up contains one-step, two-step, and multi-step problems. Students may wish to draw a picture that shows the number of male and female monkeys in each exhibit.

- | | | | |
|--|---|---|--|
| <input checked="" type="checkbox"/> Addition | <input checked="" type="checkbox"/> One-step problems | <input type="checkbox"/> Teacher-facilitated | <input type="checkbox"/> Below & On Grade Level |
| <input checked="" type="checkbox"/> Subtraction | <input checked="" type="checkbox"/> Two-step problems | <input checked="" type="checkbox"/> Small Group | <input checked="" type="checkbox"/> On Grade Level |
| <input checked="" type="checkbox"/> Multiplication | <input checked="" type="checkbox"/> Multi-step problems | <input checked="" type="checkbox"/> Tutoring/Intervention | <input type="checkbox"/> On Grade Level & Advanced |
| <input checked="" type="checkbox"/> Division | <input type="checkbox"/> Estimation | <input checked="" type="checkbox"/> Centers | <input type="checkbox"/> Challenge |



Setting Up For Instruction

- Prepare **5.O.3 Ramp Up PG.1** so that it can be projected using your classroom technology.
- Make 1 copy of **5.O.3 Ramp Up** for each student.



Thought Extenders

- Why did you choose this operation? What are the clues in the problem? What actions are taking place in the problem?
- Is the action in the problem putting things together or taking them apart? Is the problem creating groups? Is the problem counting groups? Is the problem separating things into groups?
- Why is the operation addition and not subtraction? Why is the operation multiplication and not division? Why is the operation multiplication and not addition? Why is the operation subtraction and not division?
- How is addition different from subtraction? How is it similar?
- How is multiplication different from addition? How is it similar?
- How is multiplication different from division? How is it similar?
- How is subtraction different from division? How is it similar?
- Could there be two right answers (e.g., repeated addition vs. multiplication, or repeated subtraction vs. division)?
- Could there be two different ways to work a problem?
- How did you know if you needed one operation or two operations to solve the problem?
- Is there a hidden question in the problem?
- Is there unnecessary information in the problem?
- Did you answer the question that was asked in the problem?



How-To Guide

1. Put students in groups of 3–4. Hand out materials.
2. Project Problem #1. Have students read #1 and discuss the context of the problem.
3. Questions for Discussion:
 - What information does the problem give us? What do we know?
 - What kinds of questions could be asked about the quantities (information) in the problem? (Have students write the questions on **5.O.3 Ramp Up**.)
 - Do the questions have the same answers?
 - How do you know which information to use to answer the question?
4. Project Problem #2 and work through it with students in the same way.
5. Have students work in groups to answer the questions that were generated for Problems #1 and #2 and solve Problems #3–#6.



5.O.3 RAMP UP ANSWER KEY

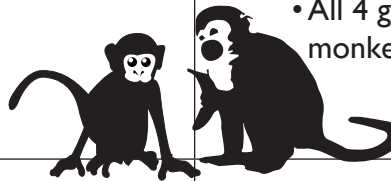
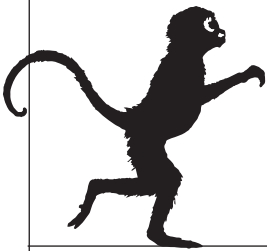
Questions	Answers
<p>1 Possible questions include:</p> <p>Q1. What is the total number of female monkeys in the exhibits?</p> <p>Q2. What is the total number of male monkeys in the exhibits?</p> <p>Q3. Are there more male or female monkeys in the exhibits?</p>	<p>Answers vary based on the question asked.</p> <p>Q1. 400</p> <p>Q2. 350</p> <p>Q3. More females</p>
<p>2 Possible questions include:</p> <p>Q1. How many adults are there?</p> <p>Q2. How many adults and children are there in total?</p>	<p>Answers vary based on the question asked.</p> <p>Q1. 281</p> <p>Q2. 373</p>
<p>3 Next week, 3 of the male-only monkey exhibits will be closed for cleaning. The monkeys will be kept at a wildlife shelter until it's ready. How many monkeys will be available for viewing next week?</p>	<p>675 monkeys</p>
<p>4 The week after that, 2 of the exhibits that hold both males and females will be closed. How many monkeys will be available then?</p>	<p>700 monkeys</p>
<p>5 Last summer, the monkey zoo showed an exhibit of ring-tailed lemurs. (They had to take it down when a science teacher told them that lemurs aren't actually monkeys.) The exhibit held 79 lemurs. Each lemur had 13 white rings and 15 black rings on their tails. How many rings were in the lemur exhibit?</p>	<p>2,212 rings</p>
<p>6 As of 2008, there are 81 known species of New World monkeys in the Amazon basin. New World monkeys have 36 teeth. There are 96 species of Old World monkeys. Old World Monkeys have 32 teeth. If we had 1 of each species of monkey in a room, how many monkey teeth would be in the room?</p>	<p>5,988 monkey teeth</p>



Directions: Using the information in the problem, write two questions that could be asked and answered.

1 Mr. Haroo's monkey zoo has 30 exhibits. Each exhibit has 25 monkeys.

- 10 exhibits have only males.
- 10 exhibits have only females.
- The other exhibits have 10 male and 15 female animals each.



2 It's morning, and time for the zoo to open. Group 1 enters the zoo.

- In Group 1, there are 23 children who rush to the front of the monkey exhibit and start making faces.
- There are 3 adults for each child in Group 1.
- Groups 2 and 3 have the same number of people as in Group 1.
- Group 4 has 5 additional adults.
- All 4 groups want to make faces at the monkeys, especially the adults in the groups.

Q1: _____

Q1: _____

Q2: _____

Q2: _____



Directions: Record your answers on this sheet.

- 3** Next week, 3 of the male-only monkey exhibits will be closed for cleaning. The monkeys will be kept at a wildlife shelter until it's ready. How many monkeys will be available for viewing next week?

Estimate: _____

Solution: _____

- 4** The week after that, 2 of the exhibits that hold both males and females will be closed. How many monkeys will be available then?

Estimate: _____

Solution: _____





Directions: Record your answers on this sheet.

- 5** Last summer, the monkey zoo showed an exhibit of ring-tailed lemurs. (They had to take it down when a science teacher told them that lemurs aren't actually monkeys.) The exhibit held 79 lemurs. Each lemur had 13 white rings and 15 black rings on their tails. How many rings were in the lemur exhibit?

Estimate: _____

Solution: _____

- 6** As of 2008, there are 81 known species of New World monkeys in the Amazon basin. New World monkeys have 36 teeth. There are 96 species of Old World monkeys. Old World Monkeys have 32 teeth. If we had 1 of each kind of monkey in a room, how many monkey teeth would be in the room?

Estimate: _____

Solution: _____