


Birthday Party

Kim is planning her birthday party. She is inviting 14 friends for a total of 15 people. Use counters, draw pictures, use a number line, or write number sentences to solve the problems. Show or tell how you found your answers.



Discuss

1. Kim is planning some outdoor games. There will be three teams. How many will be on a team?
2. Kim plans to use tables that seat four people. How many tables will she need?
3. She will make 30 cupcakes. If the cupcakes are divided equally, how many cupcakes will each person get?

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4. After getting the invitations, three friends called Kim and said they could not come. How many people must she plan for now?

Use this new number of guests and Kim's plans as described in Questions 1–4 to answer Questions 5–10. Use counters, draw pictures, use a number line, or write number sentences.

5. How many people will be on each team now?
6. How many tables will she now need?
7. A. How will she divide the cupcakes now?
B. Show another way that Tina can divide the cupcakes.

✓ **Check-In: Questions 8-10**

8. Kim also plans to order six pizzas to serve for lunch.

- A. Will each person get more than or less than a whole pizza? Explain.
 - B. If she shares all the pizza equally, how much pizza will each person get?
 - C. Show or tell how you solved this problem.
9. Kim wants to put a set of 28 dominoes on each table so that each group can play a game. If all four players get the same number of dominoes, how many dominoes will each player get?

- A. Kim and her father decorated with 30 balloons. She plans to divide the balloons equally among the guests and keep the remainder. How many did she keep?
 - B. Show or tell how you solved this problem.

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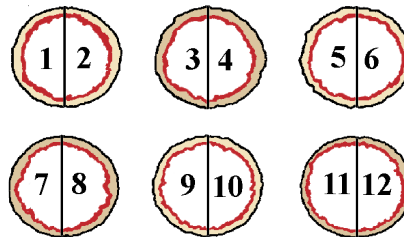
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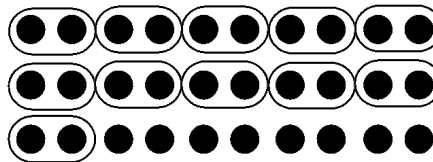
Questions 1–10

Note: Explanations will vary. Encourage the use of manipulatives and number sentences. One possible number sentence is given in the answers below.

1. * 5 people; $15 \div 3 = 5$ people
2. * 4 tables; See Figure 1 in the lesson.
3. 2 cupcakes; $30 \div 15 = 2$ cupcakes
4. 12 people; $15 - 3 = 12$ people or $14 - 3 + 1 = 12$ people
5. 4 people; $12 \div 3 = 4$ people
6. 3 tables; $4 + 4 + 4 = 12$ people
7. A. * 2 cupcakes for each guest with 6 cupcakes left over ; $30 \div 12 = 2$ with 6 leftover
B. * $2\frac{1}{2}$ cupcakes; $30 \div 12 = 2\frac{1}{2}$
8. A. Since there are 12 people and only 6 pizzas, each person will get less than a whole pizza to be fair.
B. * $\frac{1}{2}$ pizza
C. * Possible response: I drew a picture of the pizzas and then cut them each in half so there were 12 servings.



9. 7 dominoes; $7 + 7 + 7 + 7 = 28$ dominoes
10. A. 8 balloons; $30 \div 11 = 2$ with 8 leftover
B. I used 30 counters. I divided them into 11 groups and had 8 left for Tina.



*Answers and/or discussion are included in the lesson.

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**Homework (SG p. 289)
Questions 1–5**

Number sentences may vary. One possible number sentence is given in the answers below.

1. 6 pieces of ribbon with 3 inches left over;
 $7 \times 6 = 42; 42 + 3 = 45$
2. 9 inches; $36 \div 4 = 9$
3. $8\frac{1}{2}$ inches; $17 \div 2 = 8\frac{1}{2}$
4. 3¢; $3 \times 12 = 36¢$
5. 3 bars with 6 bars left over;
 $3 \times 12 = 36$ bars
 $42 - 36 = 6$ bars

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Teacher Guide

**Ice Cube Problem (TG)
Questions 1–4**


*See the lesson for discussion.

Homework

Dear Family Member:

To complete this homework assignment, your child will need a yardstick or ruler, scissors, and ribbon or string. He or she will divide lengths of ribbon or string into equal pieces. Solving problems like these with real materials is an important step in understanding division.

Thank you.



Kim will give each of her guests a party bag. After she fills the bags with toys and candy, she will tie the bags with ribbon. She bought 45 inches of red ribbon and one yard of blue ribbon.

Use a yardstick or ruler, scissors, and ribbon or string to help you answer Questions 1–3. You may also use pictures, number sentences, or words. For each problem, show or tell how you found your answer.

1. If Kim cuts the red ribbon into pieces that are 7 inches long, how many pieces of red ribbon will she have?
2. She cut the blue ribbon into four equal pieces. How long is each piece?
3. Kim needs two more pieces of ribbon. She found one piece of green ribbon that is 17 inches long. She cut it into two equal pieces. How long is each piece?

You may use coins or other counters to solve Questions 4 and 5.

4. Kim's father bought 12 bags for 36¢. How much did each bag cost?
5. Kim has 42 candy bars to put in 12 bags. How many bars can she put in each bag?

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Ice Cube Problem

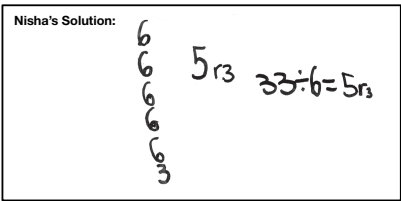
Solve the following problem.

Frank helped his mother get ready for a party. He had 33 ice cubes to put into cups. If he put six cubes in each cup, how many cups did he fill?

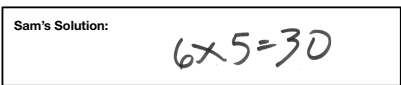
The solutions below are from other third-graders. Discuss the following questions with your partner. Use the Math Practices page in the Reference section of the Student Guide as you answer each question.

1. Which solutions are correct? How do you know?
2. If any are incorrect, how can you correct them?
3. Can you see why their strategies make sense? If so, how did they solve the problem?
4. If you cannot understand any of the strategies, what questions would you ask? What could the students add so that you would understand?

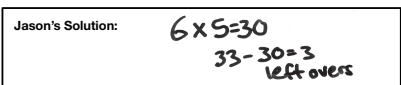
Nisha's Solution:



Sam's Solution:



Jason's Solution:



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*Answers and/or discussion are included in the lesson.