Describing the Shape of the Data

Investigation 1

Investigation 2

Investigation 3

Multiplication Combinations of 3s, 6s, and 12s

NOTE: Students practice multiplication combinations ("facts"). They look for patterns in the 3s, 6s, and 12s combinations.

SMH 29–34

1. Solve these problems.

$1 \times 3 =$		
$2 \times 3 =$	$1 \times 6 =$	
$3 \times 3 =$		
$4 \times 3 =$	$2 \times 6 =$	$1 \times 12 =$
$5 \times 3 =$		
$6 \times 3 =$	$3 \times 6 =$	
$7 \times 3 =$		
$8 \times 3 =$	$4 \times 6 =$	$2 \times 12 =$
$9 \times 3 =$		
$10 \times 3 =$	$5 \times 6 =$	
$11 \times 3 =$		
$12 \times 3 =$	$6 \times 6 =$	$3 \times 12 =$

2. What patterns do you notice?

3. Ask someone at home to help you practice the multiplication combinations that you are working on.

Party Supplies

NOTE Students practice solving multiplication problems in a story context.

Solve each of the story problems below.
Show your thinking.

1. Ms. Ruiz bought 13 packages of cups for a big party. Each package contains 8 cups. How many cups did she buy?

2. Ms. Ruiz bought 9 packages of plates for the party. Each package contains 12 plates. How many plates did she buy?

3. Ms. Ruiz bought 7 packages of napkins for the party. Each package contains 16 napkins. How many napkins did she buy?

Ongoing Review

4. Which product is greater than 70?

A. 7×9

B. 6×12

C. 5×11

D. 8×8

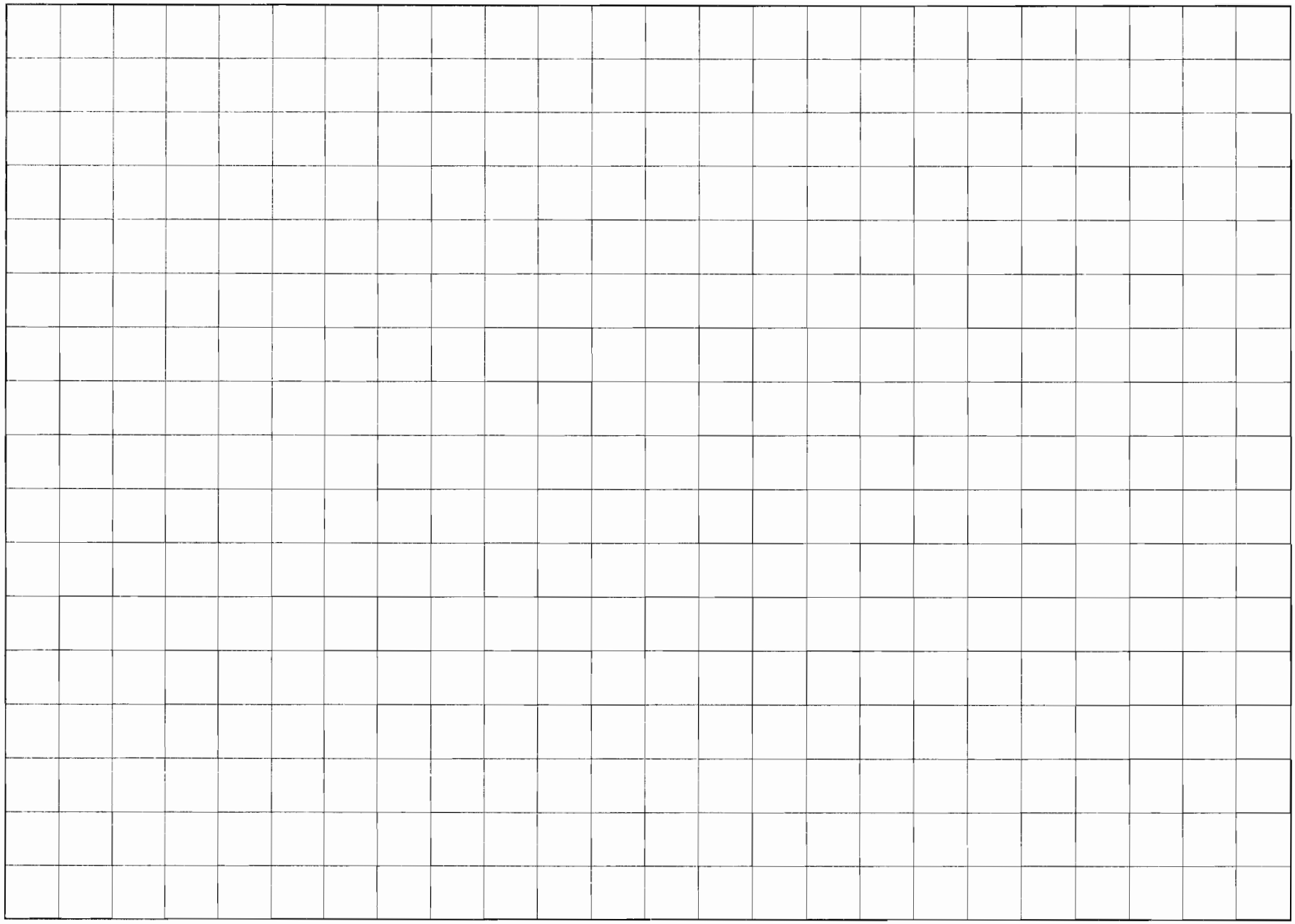
Related Multiplication Combinations

Solve each set of related problems below.

NOTE Students solve sets of related multiplication combinations. Encourage them to solve each problem mentally.

SMH 29–34

1. 5 × 7 = _____ 10 × 7 = _____	**2.** 9 × 10 = _____ 9 × 12 = _____	**3.** 7 × 6 = _____ 7 × 7 = _____
4. 4 × 8 = _____ 8 × 8 = _____ 12 × 8 = _____	**5.** 4 × 6 = _____ 8 × 6 = _____ 12 × 6 = _____	**6.** 6 × 8 = _____ 7 × 8 = _____ 8 × 8 = _____
7. 10 × 10 = _____ 11 × 11 = _____ 12 × 12 = _____	**8.** 12 × 3 = _____ 12 × 6 = _____ 12 × 9 = _____	**9.** 6 × 6 = _____ 8 × 6 = _____ 10 × 6 = _____
10. 11 × 4 = _____ 11 × 6 = _____ 11 × 10 = _____	**11.** 7 × 5 = _____ 7 × 6 = _____ 7 × 11 = _____	**12.** 9 × 5 = _____ 9 × 7 = _____ 9 × 9 = _____



Factors

For each of the following numbers, list as many pairs of factors as you can.

NOTE Students practice multiplication combinations ("facts") by finding pairs of factors for a given product.

SMH 22, 23

Example: 28 2 × 14 4 × 7 ____ × ____	24 ____ × ____ ____ × ____ ____ × ____
32 ____ × ____ ____ × ____ ____ × ____	18 ____ × ____ ____ × ____ ____ × ____
16 ____ × ____ ____ × ____ ____ × ____	20 ____ × ____ ____ × ____ ____ × ____

How Many Cavities?

How many cavities have you had?

NOTE Students are gathering data about the number of cavities they have had for a class data collection.

SMH 87

Comparing the Heights of First and Fourth Graders

1. How do the heights of the first-graders compare with the heights of the fourth graders in your class? Write three statements about this question.

In your statements include ideas about the data such as these: Where are there lots of data? How big are clumps of data? What are the tallest heights and the shortest heights? What outliers are there? What do you think are the typical heights of first graders and of fourth graders?

a. _____

b. _____

c. _____

2. About how much taller do you think a fourth grader is than a first grader? Why do you think so? Support your ideas with evidence from the data.

_____

_____

_____

_____

_____

_____

Counting Around the Class

NOTE Students find the multiples of a given number and solve multiplication problems.

SMH 25

1. Mr. Patel's students counted by 5s. The first person said 5, the second said 10, and the third said 15. Each student said one number.

How many students counted to get to 100? _____

How do you know?

2. Ms. Bailey's students counted by 10s. The first person said 10, the second said 20, and the third said 30. Each student said one number.

a. How many students counted to get to 270? _____

How do you know?

b. When Ms. Bailey's students counted by 10s, did anyone say the number 225? _____

How do you know?

Ongoing Review

3. Which has the same product as 3×12?

A. 8×4

B. 6×24

C. 6×6

D. 9×6

Things That Come in Groups

Solve the story problems below. Write a multiplication equation for each problem and show how you solved it.

NOTE Students practice multiplication by solving story problems.

SMH 16, 17

Spiders have 8 legs.

1. How many legs are on 5 spiders? _____

Equation: $5 \times 8 =$ _____

2. How many legs are on 11 spiders? _____

Equation: _____

3. How many legs are on 16 spiders? _____

Equation: _____

Ongoing Review

4. Which is **not** a factor of 54?

A. 3

B. 6

C. 8

D. 9

Developing a Survey Question (page 1 of 3)

1. Choose a survey question.

Think about a question that will:

- Help you compare two groups of people.
- Result in numerical data.
- Give you data that you are interested in.
- Help you find out something that you don't know.

Decide on a question for your survey. Write your question.

_____

_____

2. Try out and revise your question.

Ask three students your survey question. Talk with them and your partner about making changes to your question.

Think about the following:

- Did the students understand your question?
- Were they able to respond to your question without further explanation from you?
- Did their responses give you the information you were interested in?

If you revise your question, write it here.

_____

_____

Developing a Survey Question (page 2 of 3)

3. Plan your survey and make predictions.

a. You will compare the responses to your question from two groups of students. Which two groups of students will you compare?

b. What do you want to find out from comparing these two groups of students?

c. What do you predict you will find when you compare the responses of these two groups of students? Why do you think this will be the result?

Developing a Survey Question (page 3 of 3)

4. Plan how to collect and record your data.

Think about the following:

- How are you going to record the data as you collect them?
- What information do you need to write?
- How are you going to keep track of which people you have asked?
- Who is going to do what?

Write how you will record and keep track of your data.

Peanut Count

NOTE Students represent data in a line plot.

SMH 88–89

Each of the students in Mr. Herrera's class took a handful of trail mix and counted the number of peanuts.

1. Make a line plot of the data.

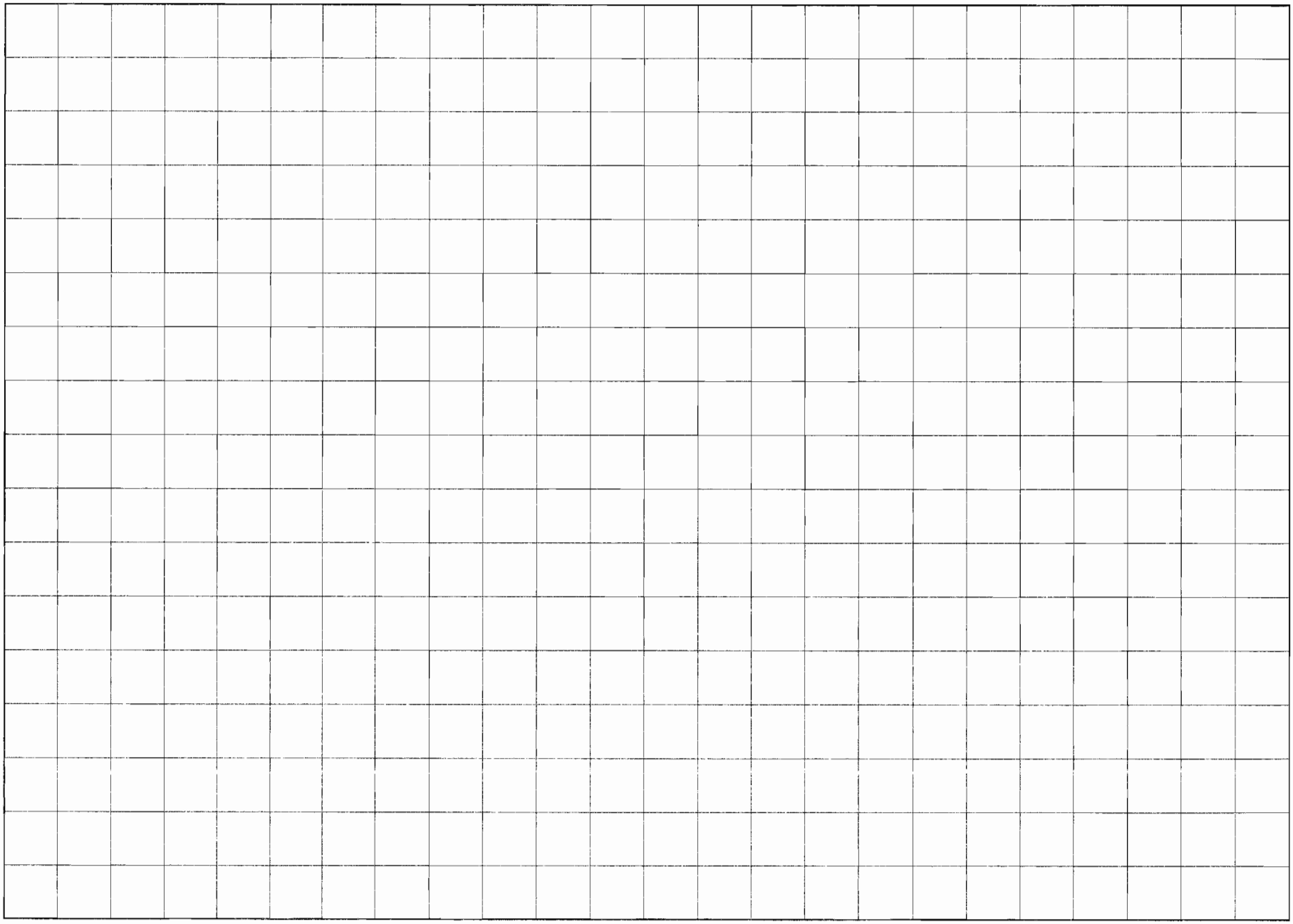
Peanut Count			
Benson	8	Yuson	6
Yuki	5	Anna	7
Noemi	6	Helena	9
Derek	13	LaTanya	8
Bill	10	Marisol	9
Abdul	9	Andrew	8
Steve	8	Ursula	10
Damian	8	Sabrina	6
Lucy	8	Richard	6

2. If you took a handful of the same trail mix, how many peanuts do you think you would get? Explain why you think so.

Ongoing Review

3. What is the highest number of peanuts a student counted?

A. 13 **B.** 7 **C.** 6 **D.** 5



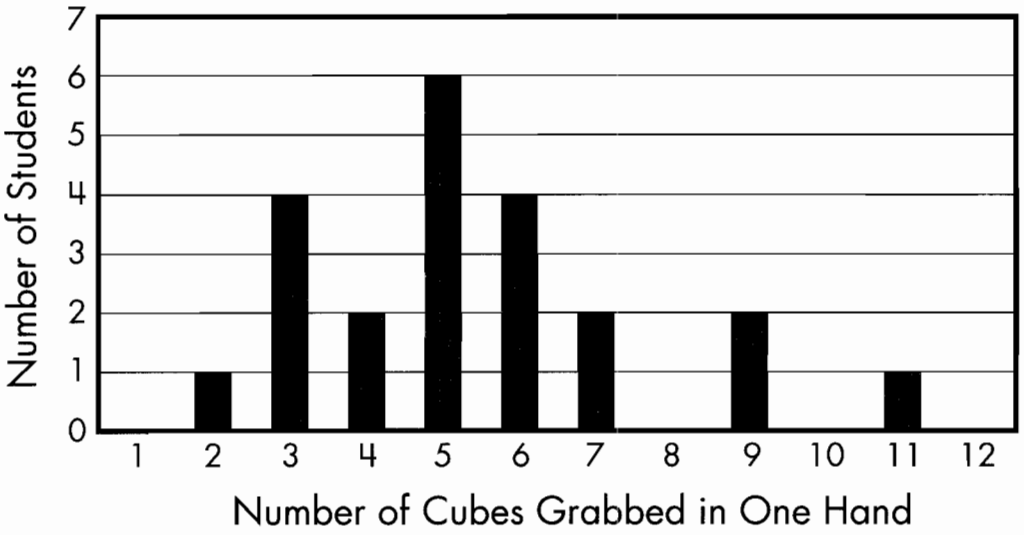
How Many Cubes Can Students Grab? (page 1 of 2)

Students in a third-grade class collected data about how many cubes kindergarteners and third graders could grab with one hand. They put their data in two bar graphs.

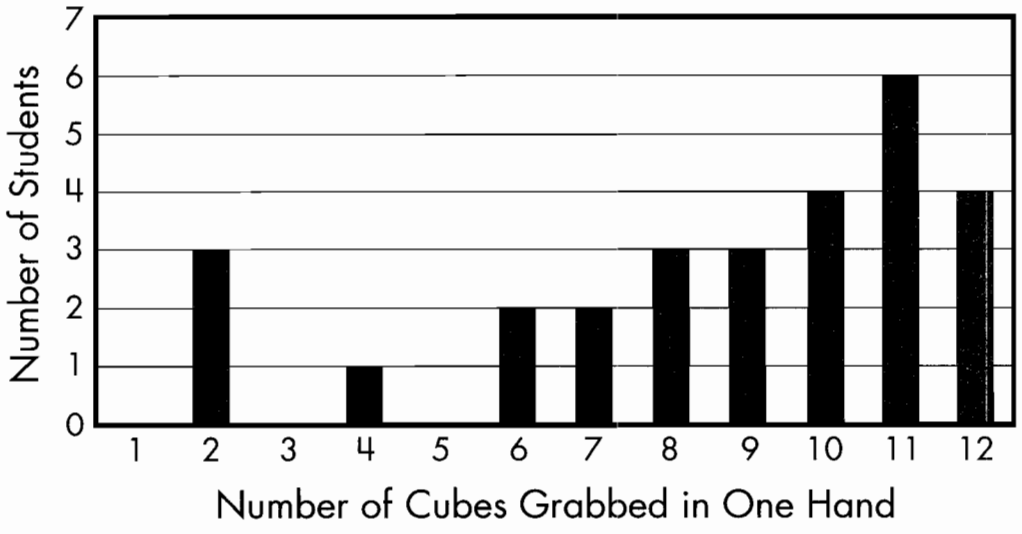
NOTE In this homework, students look carefully at the shapes of two different sets of data and compare them.

SMH 94–97

Kindergarteners



Third Graders



How Many Cubes Can Students Grab? (page 2 of 2)

1. Write three statements about the number of cubes third graders and kindergartners grabbed.

a. _____

_____

b. _____

_____

c. _____

_____

2. How many cubes would you say a kindergartner typically grabs? Why would you say this is typical?

_____

_____

3. How many cubes would you say a third grader typically grabs? Why would you say this is typical?

_____

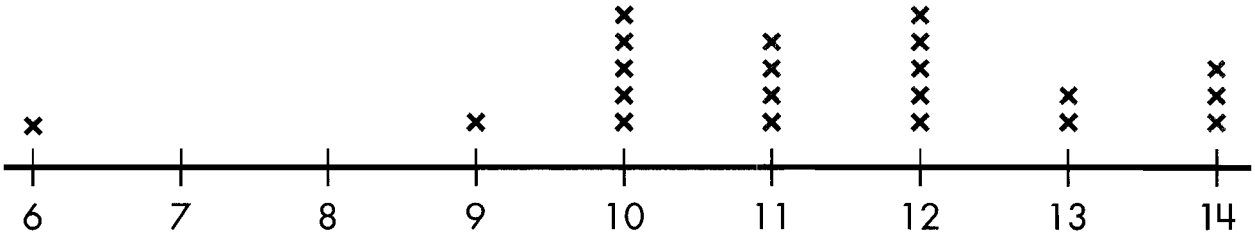
_____

Interesting Plot

NOTE Students describe features of a set of data on a line plot.

SMH 88, 89, 90, 91

Ollie counted the number of houses on each block between home and school. The line plot shows Ollie's data.



1. What seems to be the typical number of houses? Explain why you think so.

2. An *outlier* is a piece of data that "lies outside" the rest of the data. Are there any outliers? If so, what is it and what might account for this unusual piece of data?

Ongoing Review

3. How many blocks have 11 houses?

A. 1 **B.** 2 **C.** 3 **D.** 4

Missing Factors

Fill in the missing factors in these problems.

NOTE Students practice multiplication combinations ("facts") in related sets.

SMH 29–34

1. 6 × _____ = 36 6 × _____ = 72	**2.** 9 × _____ = 36 9 × _____ = 72	**3.** _____ × 12 = 36 _____ × 12 = 72
4. _____ × 8 = 48 _____ × 8 = 88	**5.** 11 × _____ = 44 11 × _____ = 88	**6.** 6 × _____ = 48 6 × _____ = 54
7. 9 × _____ = 45 9 × _____ = 54 9 × _____ = 63	**8.** _____ × 7 = 21 _____ × 7 = 42 _____ × 7 = 84	**9.** _____ × 8 = 40 _____ × 8 = 48 _____ × 8 = 56
10. 7 × _____ = 28 7 × _____ = 35 7 × _____ = 63	**11.** 6 × _____ = 36 8 × _____ = 64 12 × _____ = 144	**12.** _____ × 12 = 48 _____ × 12 = 60 _____ × 12 = 108

Related Multiplication Combinations

Solve the following problems.

NOTE Students practice multiplication combinations ("facts") in related sets.

SMH 29–34

1. 5 × 8 = _____ 10 × 8 = _____	**2.** 11 × 10 = _____ 11 × 12 = _____	**3.** 7 × 4 = _____ 7 × 8 = _____
4. 4 × 6 = _____ 8 × 6 = _____ 12 × 6 = _____	**5.** 4 × 9 = _____ 8 × 9 = _____ 12 × 9 = _____	**6.** 6 × 6 = _____ 7 × 7 = _____ 8 × 8 = _____
7. 10 × 12 = _____ 11 × 12 = _____ 12 × 12 = _____	**8.** 8 × 3 = _____ 8 × 6 = _____ 8 × 9 = _____	**9.** 6 × 6 = _____ 8 × 6 = _____ 10 × 6 = _____
10. 11 × 5 = _____ 11 × 6 = _____ 11 × 11 = _____	**11.** 7 × 5 = _____ 7 × 6 = _____ 7 × 12 = _____	**12.** 12 × 5 = _____ 12 × 7 = _____ 12 × 9 = _____

What Did You Learn From Your Survey? (page 1 of 2)

1. What was your survey question?

2. Suppose that a teacher was interested in your survey and asked, "What did you learn from your survey?" Write at least three things you learned. Give evidence from the data.

What Did You Learn From Your Survey? (page 2 of 2)

3. How did the results of your survey compare with your predictions?

4. Now that you have learned some things about your question, can you think of some other survey questions that you would ask to learn more about this topic?

5. What else did you learn about data investigations from doing this project?

Division With Remainders

NOTE Students practice solving division problems and interpreting remainders in story problem contexts.

SMH 47, 48–49

1. Fifty people are waiting in line for the roller coaster. Each car holds 8 people. How many cars will the 50 people fill?

Division equation: _____ ÷ _____ = _____ Answer: _____

2. Forty people bought tickets for a boat ride. Twelve people can ride in a boat at a time. How many boats will the 40 people fill?

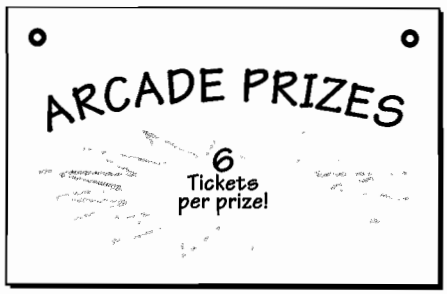
Division equation: _____ ÷ _____ = _____ Answer: _____

3. How many prizes could you get with 50 tickets?

Division equation:

_____ ÷ _____ = _____

Answer: _____



4. The students in Mr. Brown's class counted around the class by 5s. Each student said one number. The number they ended with was 65. How many students counted?

Division equation: _____ ÷ _____ = _____ Answer: _____

Ongoing Review

5. The students in Ms. Jones' class counted around the class by 4s. Each student said one number. There are 29 students in her class. Which of these numbers did they say?

A. 120 **B.** 100 **C.** 50 **D.** 10

Arranging Cans of Juice (page 1 of 2)

NOTE Students find factors by arranging numbers into rectangular arrays.

SMH 18, 23

Solve the following problems.

1. a. You have 28 cans of juice. Show all of the ways you can arrange these cans into arrays. Draw the arrays in the space below.

b. List all of the factors of 28.

Arranging Cans of Juice (page 2 of 2)

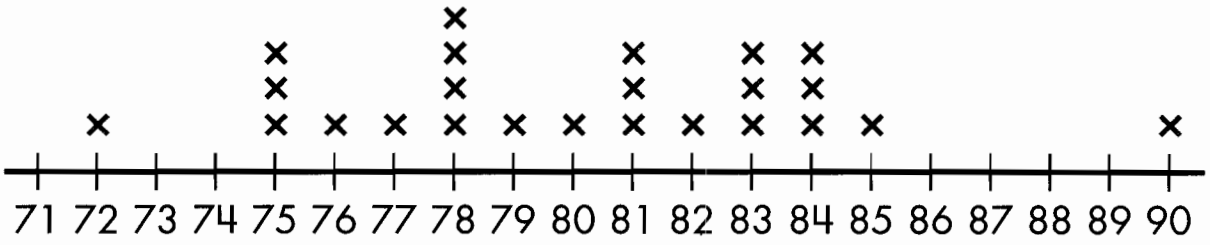
2. a. Mauricio has 42 cans of juice. Show all of the ways he can arrange his cans into arrays. Draw the arrays in the space below.

b. List all of the factors of 42.

Mystery Data A

The table and graph below show the same data.
These data represent some group of living things.

Individual	Inches	Individual	Inches	Individual	Inches
A	84	I	84	Q	81
B	83	J	84	R	79
C	78	K	85	S	75
D	75	L	82	T	76
E	90	M	78	U	83
F	77	N	83	V	81
G	75	O	72	W	78
H	81	P	80	X	78



Heights or Lengths of Members of a Group of Living Things in Inches

1. What is the median height or length of this group?
Are the data clustered around the median or spread out?

2. What do you think the group could be? Give reasons for your answer.

Mystery Data B

The table and graph below show the same data.
These data represent some group of living things.

Individual	Inches	Individual	Inches	Individual	Inches
A	78	G	86	M	84
B	96	H	93	N	80
C	114	I	64	O	72
D	94	J	54	P	54
E	63	K	72	Q	79
F	72	L	108	R	116

Heights or Lengths of Members of a Group of Living Things in Inches

1. What is the median height or length of this group?
Are the data clustered around the median or spread out?

_____

_____

2. What do you think the group could be? Give reasons for your answer.

_____

_____

_____

_____

Mystery Data C 

This information is about a group of living things:

- The median height or length of these living things is 19.5 inches.
- The shortest height or length in this group is 18 inches.
- The tallest height or length in this group is 22 inches.
- There are 30 individuals in this group.

1. Make a line plot of the heights or lengths of these living things. Decide where you think the 30 pieces of data might belong, according to the information above.

2. What do you think the group could be? Give reasons for your answer.

Parking Lot Data

NOTE Students represent and describe a set of data.

SMH 88–91

The students in Ms. May's class counted the cars in the school parking lot at the beginning of every school day for a month.

1. Represent the data in a table, a line plot, or with tallies.

Number of Cars in the Parking Lot				
18	23	22	25	20
23	19	17	24	23
22	23	25	24	24
22	23	22	24	25

2. Describe the data. Try to include a discussion of the range, how it clumps or spreads out, whether there are any outliers, and what is typical.

Ongoing Review

3. What is the median number of cars in the parking lot?

A. 20 **B.** 21 **C.** 22 **D.** 23

Things That Come in Groups

Solve the story problems below. Write a multiplication equation for each problem, and show how you solved it.

NOTE Students solve multiplication problems and write an equation to represent each problem.

SMH 16, 17

Insects have 6 legs.

1. How many legs do 9 insects have? _____

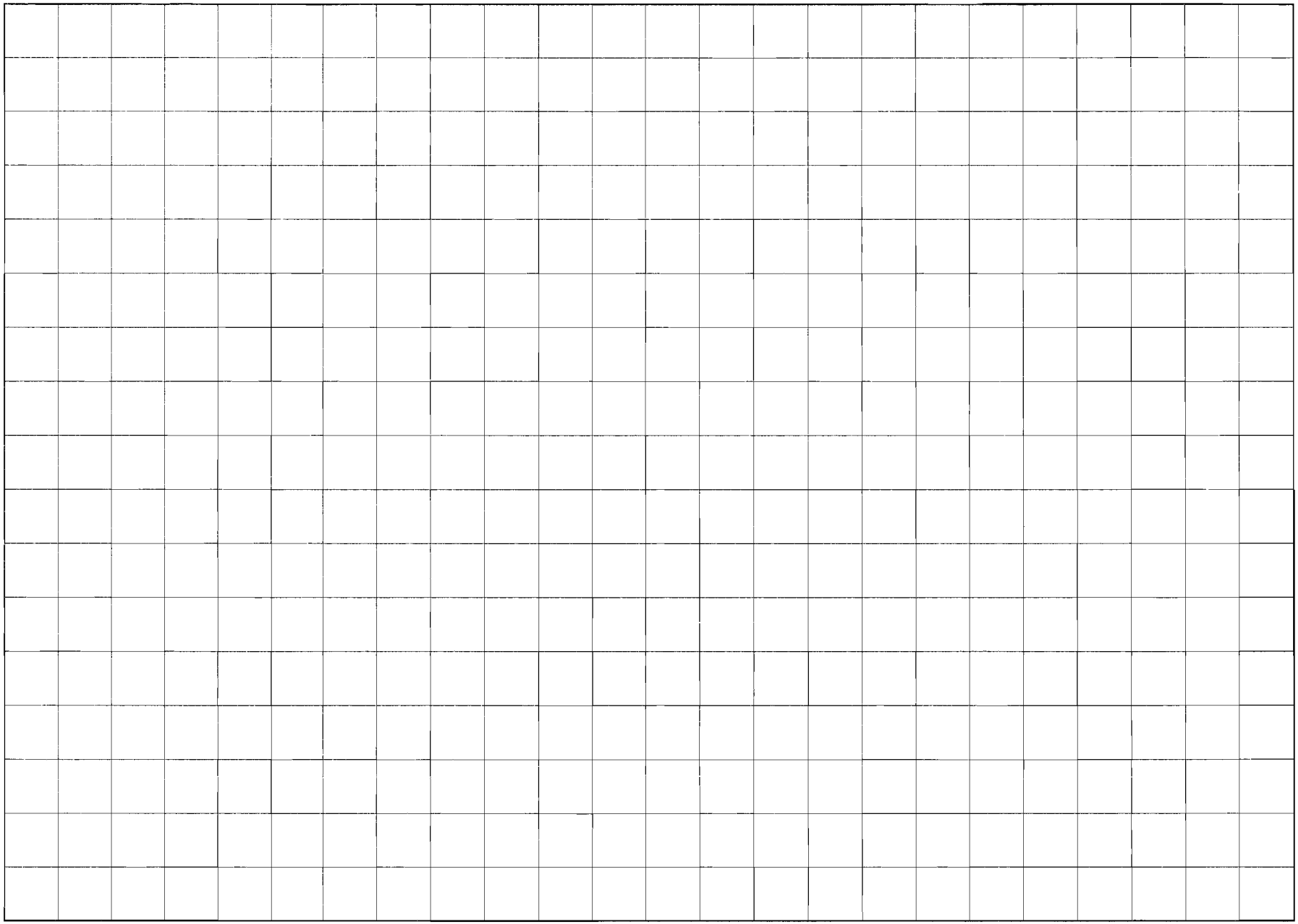
Equation: _____

2. How many legs do 11 insects have? _____

Equation: _____

3. How many legs do 20 insects have? _____

Equation: _____



Name

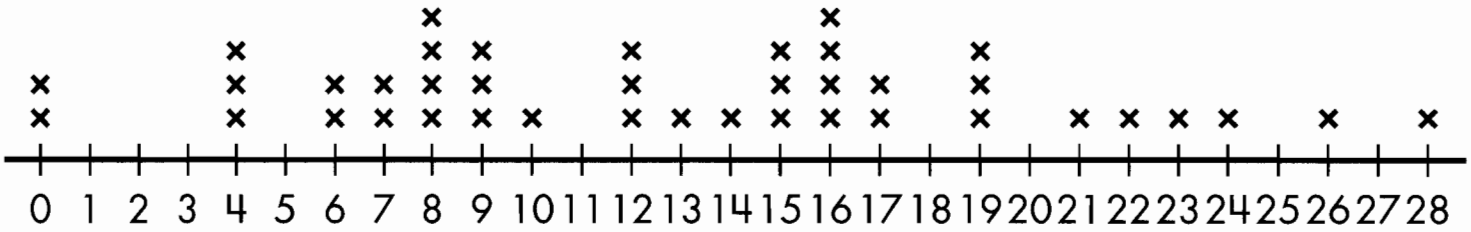
Date

Describing the Shape of the Data

Comparing WNBA Players' Points Per Game (page 1 of 2)

Yolanda Griffith and Mwadi Mabika both played basketball in the WNBA (Women's National Basketball Association). They each scored points during most of the games they played in the 2003 season.

Here is a line plot of the points Mabika scored in each of the 40 games she played in the 2003 season:



Points Mabika Scored per Game

Below are the points Griffith scored during each of the 39 games she played in the 2003 season. Make a line plot of her points per game:

10	15	12	17	20	27	17	12	10	8	19	19	19	6	7	12	16	12	16	21
22	22	11	24	20	15	17	17	18	7	27	15	22	13	6	4	15	11	7	

Points Griffith Scored per Game

Comparing WNBA Players' Points Per Game (page 2 of 2)

1. What is the median of Mabika's points per game? _____

How did you figure out the median?

_____

_____

_____

2. What is the median of Griffith's points per game? _____

How did you figure out the median?

_____

_____

_____

3. How do the number of points Griffith scored in the games she played in the 2003 season compare with the number of points Mabika scored? Write at least three statements that compare Mabika's points-per-game with Griffith's points-per-game.

Consider where the data are concentrated, the highest and lowest numbers of points scored, the outliers, and the medians.

1. _____

_____

2. _____

_____

3. _____

_____

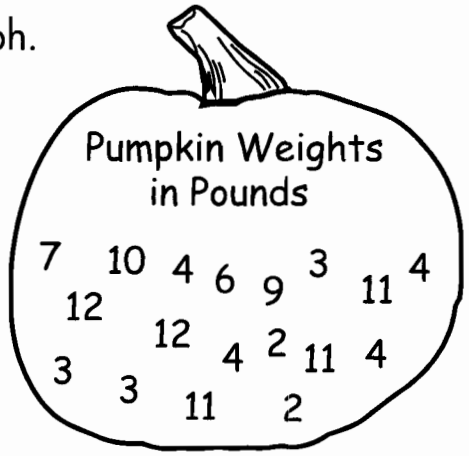
How Heavy is Your Pumpkin?

NOTE Students practice representing and describing data.

SMH 88–93

Damian grew eighteen pumpkins and recorded their weights when he picked them.

1. Organize the data in a line plot or other graph.



2. Describe how the data is spread out by finding the median and other measures, such as the range. Discuss whether you think the median *alone* provides a good description of the data and why.

Ongoing Review

3. Half of the pumpkins weigh less than

A. 5 pounds **B.** 4 pounds **C.** 3 pounds **D.** 2 pounds

Is This a Good Game? (page 1 of 2)

Use Mabika's and Griffith's points per game to answer the following questions.

1. Barney, who is a big fan of Mwadi Mabika, went to her game on May 28. Mabika scored 10 points. Barney wants to know whether this was a good game or a bad game for Mabika. What is your opinion? Use the data to support your opinion.

2. Venetta, who is a big fan of Yolanda Griffith, went to her game on July 5. Griffith scored 17 points. Venetta wants to know whether this was a good game or a bad game for Griffith. What is your opinion? Use the data to support your opinion.

3. Suppose that you were an owner of a team who was thinking about hiring Mwadi Mabika or Yolanda Griffith. As you decide whom to hire, one of the things you want to look at carefully is the player's points per game. According to their point scoring data, which player do you think you might hire for your basketball team? Why?

Is This a Good Game? (page 2 of 2)

4. Suppose that a sports reporter is writing a story comparing the points Yolanda Griffith and Mwadi Mabika scored during the 2003 season. The reporter is planning to report their median scores. What can the reporter's readers learn from a comparison of their median scores?

5. Do you think this is enough information for readers to know about Griffith's and Mabika's scoring records? If not, what other information do you think the reporter should include?

Multiplication Pairs

NOTE Students practice solving multiplication problems.

SMH 16–17

1. Solve each pair of multiplication problems below.

Use the first problem to help you solve the second problem.

$12 \times 8 =$ _____	$15 \times 6 =$ _____
$24 \times 8 =$ _____	$30 \times 3 =$ _____
$15 \times 4 =$ _____	$9 \times 9 =$ _____
$15 \times 8 =$ _____	$18 \times 9 =$ _____
$32 \times 5 =$ _____	$8 \times 6 =$ _____
$16 \times 10 =$ _____	$16 \times 6 =$ _____

Ongoing Review

2. Which of the following does not equal 12×8?

A. 24×4

B. 2×48

C. 3×28

D. 6×16

Height Comparisons
(page 1 of 2)

NOTE Students use a set of data to answer questions about the lengths or heights of members of a group of living things.

SMH 11–12

A few days ago, you looked at some heights and lengths of different animals and people. Look at the following heights and lengths:

Names	Heights/Lengths
Vince Carter (basketball player)	78 inches
Shaquille O'Neal (basketball player)	85 inches
Baby 1	18 inches
Baby 2	22 inches
Fourth grader	64 inches
Shannon (boa constrictor)	116 inches
Black cottonwood (tree)	1,764 inches

1. Who is the taller basketball player? _____

Who is the shorter baby? _____

How much taller is the taller basketball player than the shorter baby? _____ Show your work.

Height Comparisons
(page 2 of 2)

2. Look at the fourth grader and Shannon. How much longer is Shannon than the fourth grader is tall? _____ Show your work.

3. How tall are you? _____ Find someone or something that is at least 20" taller than you. What is it? _____ How much taller is it? _____ Show your work.

4. Look at the black cottonwood and the fourth grader. How much taller is the black cottonwood than the fourth grader? _____ Show your work.

How Many People Counted?

NOTE Students find the multiples of a given number and solve multiplication problems.

SMH 25

In these counting problems, each student said one number.

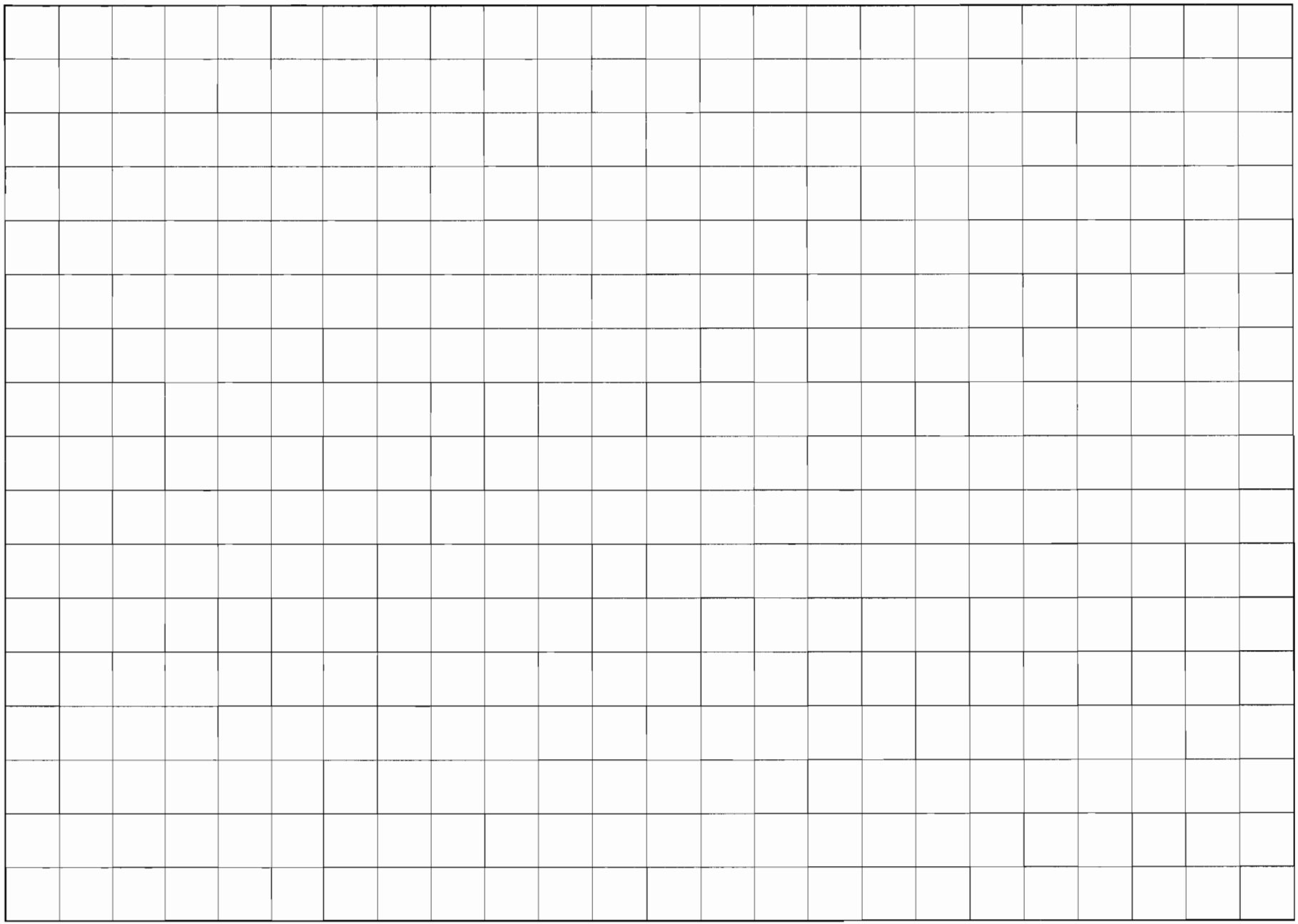
1. The students in Ms. Alonzo's class counted by 20s. The first student said 20, the second student said 40, and the third said 60.
How many students counted to get to 300? _____
How do you know?

2. The students in Mr. Nelson's class counted by 15s. The first student said 15, the second student said 30, and the third said 45. How many students counted to get to 300? _____
How do you know?

3. The students in Ms. Weinberg's class counted by 25s. The first student said 25, the second student said 50, and the third student said 75.

a. How many students counted to get to 300? _____
How do you know?

b. When the students in Ms. Weinberg's class counted by 25s, did anyone say the number 180? _____
How do you know?



Creating a Likelihood Line (page 1 of 2)

NOTE Students are beginning a study of probability. They are placing events according to their likelihood.

SMH 98

Think about the neighborhood in which you live. Can you think of any events in the future that you are *certain* will happen? Write them on the likelihood line on the next page.

Add any events that would be *impossible.*

Now add a few events that are *unlikely* to occur, that *maybe* will occur, and that are *likely* to occur. You may want to ask family members or friends to help you think of events and where they might go on the line.

Now answer the questions below. Use examples from your Likelihood Line.

1. If something is unlikely to happen, does this mean that it will never happen? _____
What would you think if it did happen?

_____

_____

_____

2. If something is likely to happen, does this mean that it will always happen? _____
What would you think if it did not happen?

_____

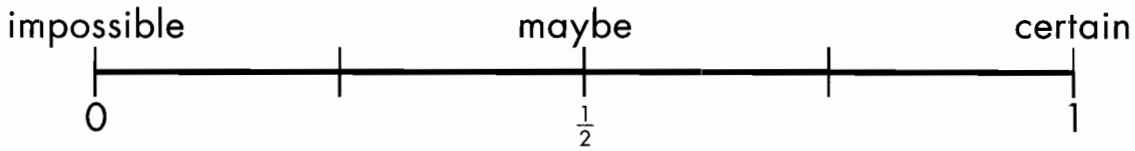
_____

_____

_____

Creating a Likelihood Line (page 2 of 2)

Placing Events on the Likelihood Line (page 1 of 2)



Put the letter of each event on the Likelihood Line above.
Explain your reasoning.

1. **Event A** The probability of flipping a coin and getting heads.
   Explain why you put it where you did.

   _____

   _____

2. **Event B** The probability of rolling a number cube and getting a 6.
   Explain why you put it where you did.

   _____

   _____

3. **Event C** The probability of rolling a number cube once and getting either a 1, a 2, or a 3.
   Explain why you put it where you did.

   _____

   _____

Placing Events on the Likelihood Line (page 2 of 2)

4. **Event D** the probability of pulling a blue cube out of a bag that contains 1 red cube and 99 blue cubes.

   Explain why you put it where you did.

5. **Event E** the probability of pulling a girl's name out of a container that holds the names of all of the students in the class.

   Explain why you put it where you did.

6. **Event F** the probability of pulling a boy's name out of the same container.

   Explain why you put it where you did.

7. **Event G** the probability of pulling your name out of the same container.

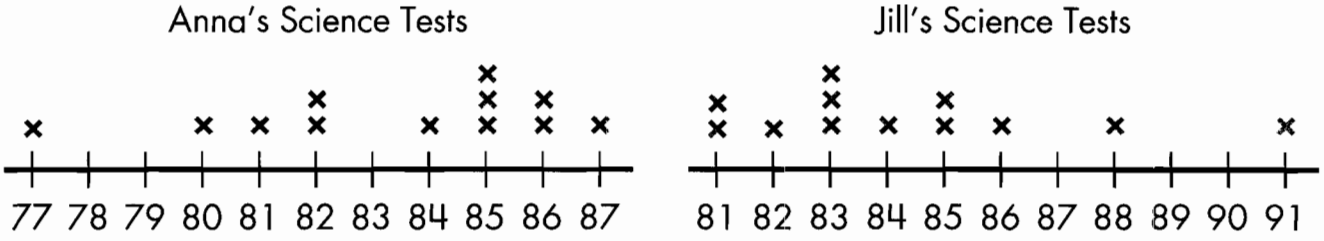
   Explain why you put it where you did.

Comparing Test Scores

These line plots show two students' scores for 12 science tests.

NOTE Students order and find the median of data sets.

SMH 92–93



1. Find the median score for each student.

Anna _____ Jill _____

2. Overall, which student do you think had better scores?

_____

Why do you think so?

_____

_____

_____

_____

Ongoing Review

3. On how many tests did Anna score more than 83?

A. 1 **B.** 3 **C.** 6 **D.** 7

Counting Around the Class

In these counting problems, each student said one number.

NOTE Students use their knowledge of multiples to solve these related problems.

SMH 25

1. The students in Ms. Alonzo's class counted by 5s. The first student said 5, the second student said 10, and the third said 15. How many students counted to get to 250? _____

How do you know?

2. The students in Mr. Nelson's class counted by 10s. The first student said 10, the second student said 20, and the third said 30. How many students counted to get to 250? _____

How do you know?

3. a. The students in Ms. Weinberg's class counted by 25s. The first student said 25, the second student said 50, and the third student said 75. How many students counted to get to 250? _____

How do you know?

b. When the students in Ms. Weinberg's class counted by 25s, did anyone say 200? _____

How do you know?

Record of Cubes in a Bag

1. Record how many of each color cube are in your bag.
_____ red cubes _____ blue cubes

2. Prediction: How many times do you think you will pull a red cube out of the bag?

3. Record which color you pull out on each trial.

4. Total number of red cubes: _____

Arranging Cans of Juice

NOTE Students find factors by arranging numbers into rectangular arrays.

SMH 23

1. a. You have 32 cans of juice. Show all the ways you can arrange these cans into arrays. Draw the arrays in the space below.

b. List all the factors of 32.

2. a. Mauricio has 36 cans of juice. Show all the ways he can arrange his cans into arrays. Draw the arrays in the space below.

b. List all the factors of 36.

Ongoing Review

3. Which number is prime?

A. 49 **B.** 27 **C.** 17 **D.** 9

Comparing Probability Experiments (page 1 of 2)

Experiment 1: 10 red cubes and 10 blue cubes

1. How many red cubes did you draw in 50 trials? _____

2. Did the number you got surprise you, or is it about what you expected? Why?

_____

_____

3. Look at the class line plot. What do you notice about the data for Experiment 1?

_____

_____

Experiment 2: 5 red cubes and 15 blue cubes

4. How many red cubes did you draw in 50 trials? _____

5. Did the number you got surprise you, or is it about what you expected? Why?

_____

_____

6. Look at the class line plot. What do you notice about the data for Experiment 2?

_____

_____

_____

_____

Comparing Probability Experiments (page 2 of 2)

Experiment 3: 15 red cubes and 5 blue cubes

7. How many red cubes did you draw in 50 trials? _____

8. Did the number you got surprise you, or is it about what you expected? Why?

_____

_____

9. Look at the class line plot. What do you notice about the data for Experiment 3?

_____

_____

10. What do you notice when you compare the results from the three experiments?

_____

_____

_____

_____

Leg Riddles

NOTE Students solve multiplication and division problems in story problem contexts.

Birds have 2 legs.
Dogs have 4 legs.
Ladybugs have 6 legs.

1. There are 48 legs, and they all belong to dogs. How many dogs are there?

2. There are 3 ladybugs, 7 dogs, and 13 birds in the house. How many legs are there altogether?

3. There are 36 legs in the house. All the legs belong to birds, dogs, and ladybugs. How many of each creature—birds, dogs, and ladybugs—might be in the house?

(There are many possible answers. How many can you find?)

Birds	Dogs	Ladybugs

Don't Miss The Bus!

NOTE Students solve real-world problems involving the math content of this unit.

SMH 88–91

Josh takes the bus to school every day. The bus is supposed to arrive at his stop at 7:30. For one month, Josh notes the times that the bus arrives in the morning. The table shows the data he collected.

7:30	7:28	7:31	7:29	7:36
7:40	7:31	7:28	7:35	7:31
7:36	7:33	7:35	7:29	7:31
7:34	7:36	7:29	7:33	7:30

1. Make a line plot of the data Josh collected. Remember to label your line plot.

2. What time will the bus most likely arrive? Why do you think so?

3. What time does Josh need to be at the bus stop to make sure he does not miss the bus? Use the data from the line plot to explain your thinking.