Finding Differences on a Number Grid

Family Note Today your child reviewed patterns on the number grid and used them to find differences between numbers. For example, one way to find the difference between 87 and 115 on the number grid is: Start at 87. Count the number of tens to 107. There are 2 tens, or 20. Count the number of ones from 107 to 115. There are 8 ones, or 8. The difference between 87 and 107 is 2 tens and 8 ones, or 28. Formal subtraction methods will be covered in the next unit.

Please return this Home Link to school tomorrow.

81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

Use the number grid to help you solve the following problems.

(1) The difference between 83 and 109 is _____.

(2) The difference between 97 and 125 is _____.

(3) Explain how you solved Problem 2. _____

_____

_____

_____

Practice

Solve.

(4) $13 = 7 +$ _____

(5) $13 = 6 +$ _____

(6) $6 =$ _____ $- 7$

(7) $7 =$ _____ $- 6$

Unit
pencils

Number-Grid Difference

Family Note Today your child received an *Everyday Mathematics Student Reference Book.* Children can use this book to look up and review topics in mathematics. You may want to take some time to explore this book. Your child also looked up the directions for and played *Number-Grid Difference,* a game that helps to develop mental subtraction strategies. For game directions, see below or *Student Reference Book,* page 251 .

Materials

SRB
89-91

- number cards 0–9 (4 of each)   If you use a regular deck of playing cards, use Jacks as 0s, Aces as 1s, and remove 10s and the other face cards.
- 1 completed number grid (see next page)
- 2 record sheets (see next page)
- 2 beans, pennies, or other counters
- calculator (optional)

Directions

(1) Shuffle the cards. Place the deck number-side down on a table.

(2) Both players take 2 cards from the deck and use them to make a 2-digit number. Mark both numbers with counters on the number grid.

(3) Players now take turns. When it is your turn:
- Find the difference between the 2 marked numbers. This is your score.
- Record the 2 numbers and your score on the record sheet.

(4) Continue playing until each player has recorded the scores for 5 turns.

(5) Add your 5 scores. Players may use a calculator to add.

(6) The player with the lower sum wins the game.

Please keep these directions and the number grid at home for future reference. Cut off and return the record sheet portion of the Home Link to school tomorrow.

9

Number-Grid Difference (continued)

Show someone at home how to play *Number-Grid Difference.*

−9	−8	−7	−6	−5	−4	−3	−2	−1	0
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

✂ -

| My Record Sheet				My Partner's Record Sheet			
Round	My Number	My Partner's Number	Difference	Round	My Number	My Partner's Number	Difference
1				1			
2				2			
3				3			
4				4			
5				5			

TOTAL _____   TOTAL _____

Telling Time

Family Note Today your child explored some of the math tools commonly used in third grade. We reviewed how to read a ruler to the nearest inch and centimeter, and how to tell time to the nearest hour, half hour, and 5 minutes. Help your child read each time by paying attention to the position of both the hour and the minute hands.

Please return this Home Link to school tomorrow.

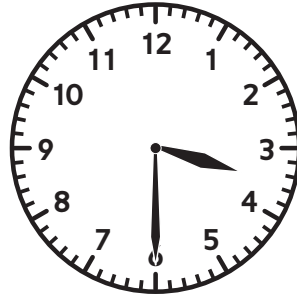① Draw the hour hand and the minute hand to show the time right now. Write the time.

_____ : _____
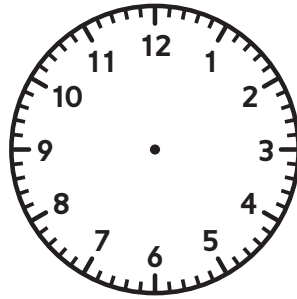
Write the time shown.
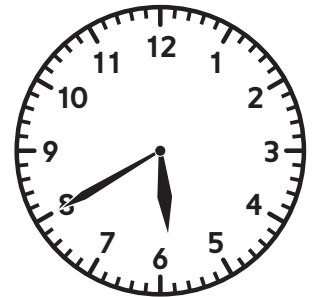
②

_____ : _____

③

_____ : _____

④

_____ : _____
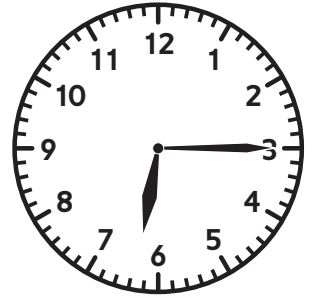
⑤

_____ : _____
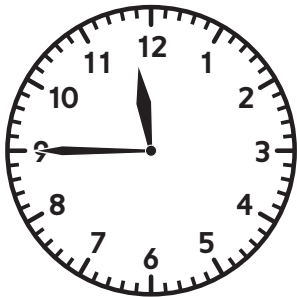
⑥

_____ : _____
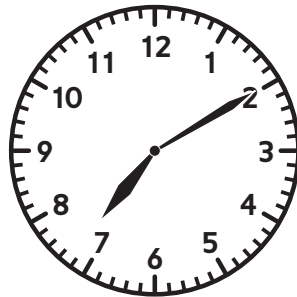
⑦

_____ : _____

⑧ Show someone how you solved the hardest problem on this page.

11

Rounding Numbers

Family Note Today your child used open number lines (*see Example*) to help round numbers to the nearest 10 and to the nearest 100. Rounding is one way to estimate calculations. For example, to estimate 83 − 37, your child can round 83 to 80 and 37 to 40, and then easily subtract 80 − 40 = 40, so an estimated answer for 83 − 37 is about 40. The actual answer, 46, is close to 40. Have your child explain how to use an open number line to round numbers.

Please return this Home Link to school tomorrow.
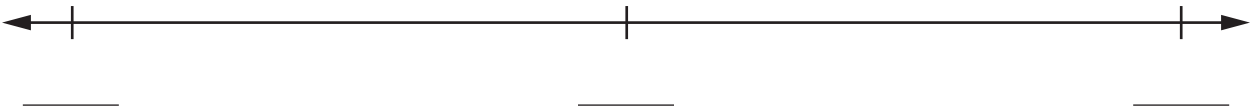
Example: What is 72 rounded to the **nearest 10**? _____*70*_____

SRB
104-107

70   72   75   80
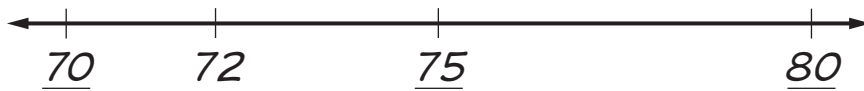
Which two multiples of 10 are closest to 72?
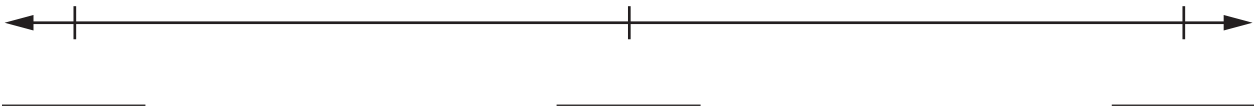

Round each number. Show your work on an open number line.

1 What is 87 rounded to the **nearest 10**? _____

_____   _____   _____

2 What is 283 rounded to the **nearest 100**? _____

_____   _____   _____

3 Round the numbers in the problem below to the nearest 10. You may sketch an open number line to help.

Use the rounded numbers to estimate the answer. Then solve.

Unit
books

    3 8
 + 5 6
 _____

Estimate: _____ + _____ = _____

Is your answer reasonable? _____ Explain. _____

_____

Telling Time to the Nearest Minute

Family Note Today your child practiced telling time to the nearest minute on analog clocks. Children used familiar times on the hour and half hour to help them read more precise times. For example, in Problem 1 the first clock shows 8:00. Children can use 8:00 as a familiar time to help them read the second clock as 8:06. They start at 8:00 and count by 5s to 8:05 and then 1 more to 8:06. As needed, help your child read and write each time.

Please return this Home Link to school tomorrow.

Write each time shown. Use the first clock to help you read the time on the second clock.
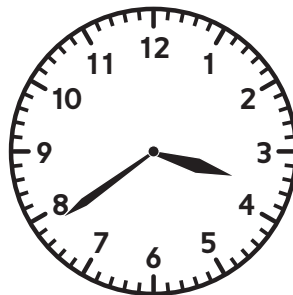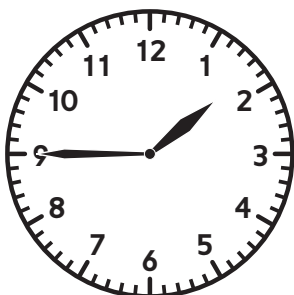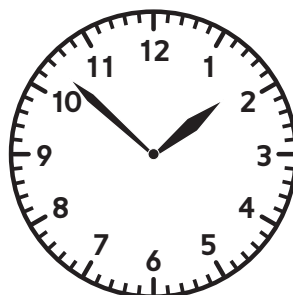
SRB
186

①

—————————— ——————————

②

—————————— ——————————

③

—————————— ——————————

Talk about when you may need to tell time to the nearest minute.

Finding Elapsed Time

Family Note Your child is learning how to use a model, such as a number line or clock, to determine elapsed time. Today we used an open number line like the one shown in the example below to figure out how long a morning class lasts. Have your child explain the example to you.

Please return this Home Link to school tomorrow.

Example: A swim meet started at 3:45 P.M. and ended at 6:15 P.M. Fill in familiar times on the number line and use it to answer the question.

SRB
18-19

Ava solved the problem this way:
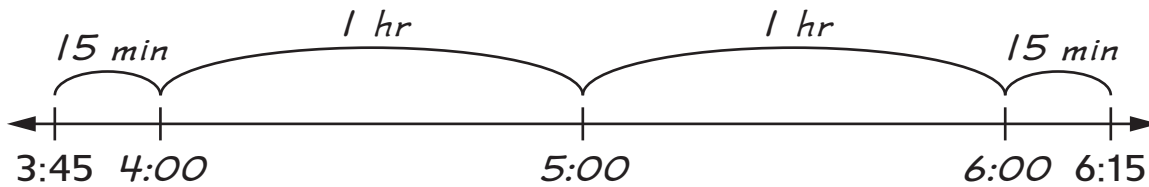
15 min + 1 hr + 1 hr + 15 min =
2 hrs and 30 min

How long was the swim meet? _____ hours and _____ minutes

① Explain Ava's strategy to someone at home.

② How much time do you usually have between the end of school and when you go to bed?

I leave school at _____. I go to bed at _____.

Make a model to help you answer the question.

I have about _____ hours and _____ minutes after school before I go to bed.

18

Solving Problems in Bar Graphs

Family Note Today your child collected and organized data about the number of letters in the class's first and last names into tally charts. Then children represented the data in bar graphs. Help your child read the data in the tally chart below and then represent the data on the bar graph. Note that the scale on the bar graph shows intervals of 2, so each interval represents 2 children.

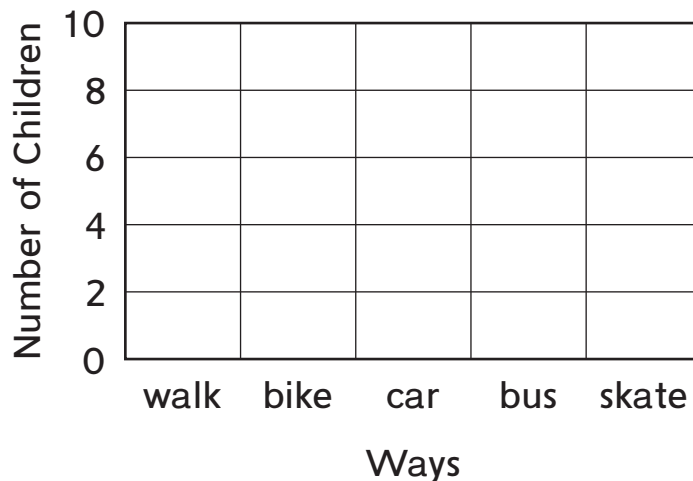***Please return this Home Link to school tomorrow.***

Look at the data in the tally chart.

How Bay School 3rd Graders Get to School	
Ways	**Number of Children**
walk	~~HHH~~ ///
bike	///
car	~~HHH~~ ////
bus	/////
skate	//

Show the data in the tally chart on the bar graph. Look carefully at the scale.

How Bay School 3rd Graders Get to School

21

Sharing Strategies for Multiplication

Family Note Today your child explored number stories that involved placing items in equal groups and organizing them into rows and columns, or arrays. (See examples below.) We used drawings and multiplication number models to help make sense of these stories. Help your child make sense of the number stories below. Note that each story can be represented by either an addition or a multiplication number model; one or the other is acceptable.

Please return this Home Link to school tomorrow.

For each number story:
- Draw a picture to match.
- Solve the problem.
- Write a number model to represent the story and your answer.

1. Thaddeus buys 5 bags of apples for a picnic. There are 6 apples in each bag. How many apples does he have?

    _____ apples

    Number model: _____

2. Elsa is planting a garden. She plants 3 rows of vegetables, with 8 plants in each row. How many plants in all are in Elsa's garden?

    _____ plants

    Number model: _____

3. Find equal groups of objects and arrays in your home or around your neighborhood. Record them on the back of this page.

4. Write an equal-groups number story about one set of objects. Use the back of this page. Solve the number story.

Introducing Division

Family Note Today your child explored ways to solve number stories using division. In the stories below the total number of objects is given, so your child needs to find either the number in each group or the number of groups. If needed, help your child count out pennies or dried beans to match the total in each story and use them to act out the story.

Please send in an unopened, 1-liter bottle of water for use in an upcoming lesson on measuring mass.

Please return this Home Link to school tomorrow.

Draw pictures to help you solve each number story.
Record your answers.

SRB
39-40

1. Connie has 18 toys to put away. She puts 6 toys in each basket. How many baskets does she use?

_____ baskets

2. Jamal is bagging prizes for the school fair. There are 30 prizes and Jamal wants to put 3 prizes into each bag. How many bags did Jamal make?

_____ bags

3. Think of things at home that could be shared equally by your family. Record them on the back of this page.

4. Write a number story about equally sharing one of the things you wrote for Problem 3. Use the back of this paper. Then solve your number story.

Foundational Multiplication Facts

Family Note Today your child worked on developing strategies for solving 2s, 5s, and 10s multiplication facts. These facts will be used later to help solve related multiplication facts. **Fact Triangles** are the *Everyday Mathematics* version of traditional flash cards. They are better tools for building fact fluency and mental-math reflexes, however, because they emphasize fact families.

A **fact family** is a group of facts made from the same three numbers. For 6, 5, and 30, the multiplication and division fact family is $5 \times 6 = 30$, $6 \times 5 = 30$, $30 \div 6 = 5$, $30 \div 5 = 6$.

Fact Triangles arrange the three numbers such that the product is below the dot at the top and the factors are in the other two corners.

Use Fact Triangles to practice basic facts with your child. Cut out the triangles from the three attached sheets. Cover either the number below the large dot (the product) or one of the numbers in a corner (a factor).
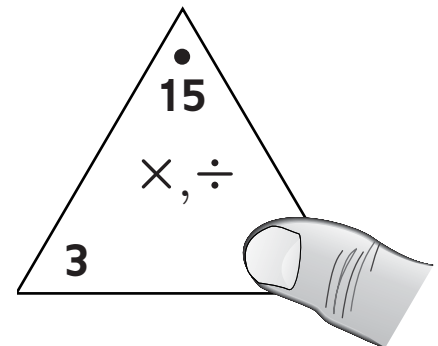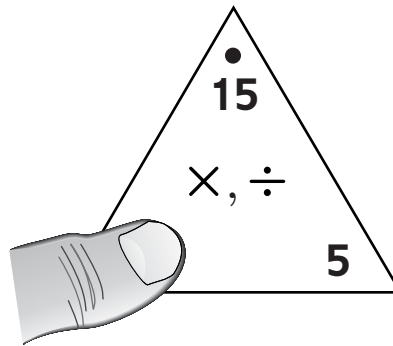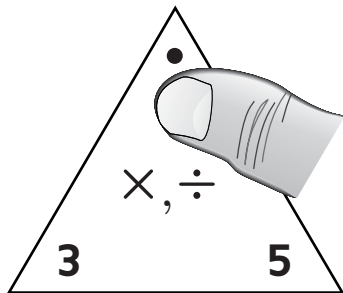
Your child may mentally solve any of the following number sentences to find the product, 15.

$3 \times 5 = ?$

$5 \times 3 = ?$

$? \div 3 = 5$

$? \div 5 = 3$

Find the factor, 3.

$15 \div 5 = ?$

$15 \div ? = 5$

$5 \times ? = 15$

$? \times 5 = 15$

Find the factor, 5.

$15 \div 3 = ?$

$15 \div ? = 3$

$3 \times ? = 15$

$? \times 3 = 15$

If your child misses a fact, flash the other two problems and then return to the fact that was missed. *Example:* Ravi can't answer $15 \div 3$. Flash 3×5, and then $15 \div 5$, and finally $15 \div 3$ a second time.

Make this activity brief and fun. Spend about 10 minutes each night for the next few weeks, or until your child learns them all. The work you do at home will support the work we are doing at school.

Please return the **second page** *of this Home Link to school tomorrow.*

Foundational Multiplication Facts (continued)

Tell someone at home about multiplication/division fact families.

① The numbers 2, 5, and 10 form the following facts:

$2 \times 5 =$ _____   _____ $\div 2 = 5$

$5 \times 2 =$ _____   _____ $\div 5 = 2$

② Knowing $6 \times 2 =$ _____ and $2 \times 6 =$ _____

helps me know _____ $\div 2 = 6$ and _____ $\div 6 = 2$.

③ The numbers 2, 7, and 14 form this multiplication/division fact family:

_____   _____

_____   _____

Write the fact family for each ×, ÷ Fact Triangle.

④ 16   ×,÷   2   8

⑤ 20   ×,÷   5   4

⑥ 60   ×,÷   10   6

_____   _____   _____

_____   _____   _____

_____   _____   _____

_____   _____   _____
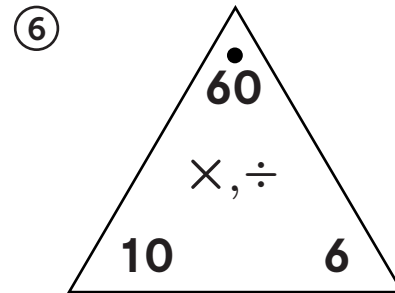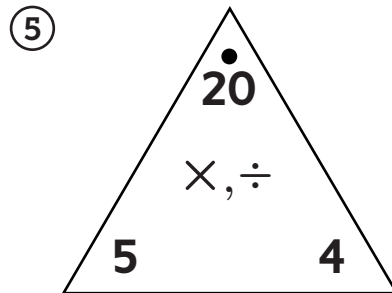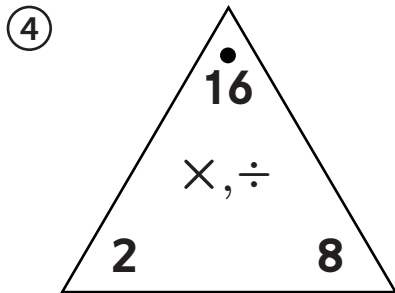
Finding Elapsed Time

Family Note Today your child learned about elapsed time. Children use clocks and open number lines to figure out the total minutes and hours that pass from a start time to an end time. Throughout the year, they will practice calculating lengths of days using sunrise and sunset data.
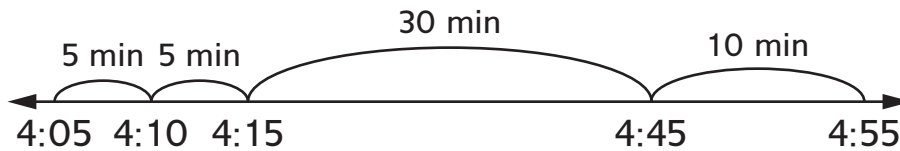
Please return this Home Link to school tomorrow.

Example: Ann starts swim practice at 4:05 P.M. and finishes at 4:55 P.M.

SRB
18-19,
187-188

How long is Ann's swim practice? Use the open number line to help.

50 minutes

5 min 5 min   30 min   10 min

4:05 4:10 4:15   4:45   4:55

Calculating elapsed time on an open number line:
5 + 5 + 30 + 10 = 50 minutes

Find the elapsed time. Use the open number line below to help.

1. Devin left for a bike ride at 10:15 A.M. He arrived at his friend's house at 10:35 A.M. How long was his bike ride?

   Devin's bike ride was _____ minutes long.

Masses of Objects

> **Family Note** Today your child used a pan balance and grams and kilograms to compare and measure objects' masses or weights. In everyday life, mass and weight are hard to tell apart and *Everyday Mathematics* does not distinguish their differences. In later science classes your child will learn how scientists treat mass and weight.
>
> Help your child find objects to compare at home. Below he or she will record the names of two objects that weigh about the same. Try to find objects that are different sizes or shapes.
>
> Please remember to send an unopened 1-liter bottle of water to school with your child.
>
> Our class is also collecting items for a Mass Museum. Help your child select an item that is 1 kilogram (2.2 pounds) or less to bring to school. Over the next several days, children will estimate and then measure the masses of objects in the museum.
>
> ***Please return this Home Link to school tomorrow.***

- Find objects that you can hold in one hand.

  SRB
  183

- Pick two objects and place one in each hand.

- Find two objects that feel like they have about the same mass or weight.

- Draw or write the names of the objects below.

- Tell someone how you know they have the same mass or weight.

Ask someone at home if you can bring things to school for the Mass Museum.

Estimating Mass

> **Family Note** Today your child explored grams and kilograms by measuring the masses of different objects with a pan balance and standard masses. Help your child solve the number stories below.
>
> *Please return this Home Link to school tomorrow.*

Solve. Hint: 1 kilogram = 1,000 grams

1 If a bottle of water has a mass of about 1 kilogram, about how much mass will it have after someone drinks 500 grams of water from it?

about _____ grams

2 Emmi's bag has a mass of 2 kilograms. Marco's bag has a mass of 1,000 grams. Whose bag has more mass? Explain.

_____

_____

_____

Practice

Fill in the unit box. Solve.

3 20 − 10 = _____

4 20 − 9 = _____

5 20 − 8 = _____

6 20 − 7 = _____

Unit