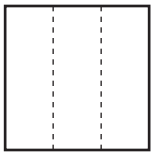
Equal Shares

Home Link 9-1

NAME DATE

Family Note

In this lesson your child divided shapes into 2, 3, or 4 equal parts and used words to first name 1 equal part and then to name all of the equal parts together. For example, the square at the right is divided into 3 equal parts.

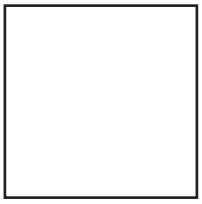


Each of the parts can be named *one-third, 1-third,* or *1 out of 3 equal parts*. All of the parts together can be named *three-thirds, 3-thirds, or 3 out of 3 equal parts*. Although your child may have had experience with standard notation for fractions ($\frac{1}{3}$, $\frac{3}{3}$, and so on), the formal introduction of standard notation occurs in third grade.

Please return this Home Link to school tomorrow.

MRB 132–133

1 Divide this square into 2 equal parts.



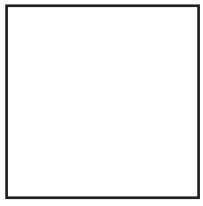
Circle names for 1 part.

one-half 1-half 2 out of 3 equal parts 1 out of 2 equal parts

Circle names for all of the parts.

1 out of 3 equal parts 2-halves two-halves 2 out of 2 equal parts

2 Divide this square into 4 equal parts.



Circle names for 1 part.

1 out of 4 equal parts 1-fourth 1 out of 3 equal parts one-quarter

Circle names for all of the parts.

whole four-fourths one-quarter 4 out of 4 equal parts

Fraction Names

Home Link 9-2

NAME DATE

Family Note

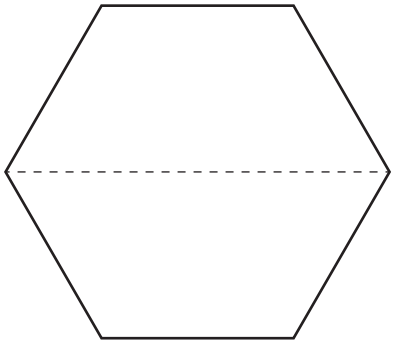
In today's lesson your child used pattern blocks to divide shapes and then used fraction words to name the equal parts. As you work through the activity below, guide your child to use names from the Fraction Names Word Box. Discuss the names of the parts of each shape.

Please return this Home Link to School tomorrow.

MRB 132–133

Fraction Names Word Box	
Names for 1 Part	**Names for All of the Parts**
one-half, 1-half, 1 out of 2 equal parts	two-halves, 2-halves, 2 out of 2 equal parts, whole
one-third, 1-third, 1 out of 3 equal parts	three-thirds, 3-thirds, 3 out of 3 equal parts, whole

1



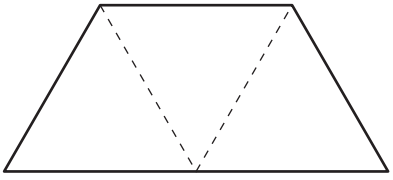
Write the name for 1 part.

_____

Write the name for all of the parts.

_____

2



Write the name for 1 part.

_____

Write the name for all of the parts.

_____

Naming Equal Shares

Home Link 9-3

NAME DATE

Family Note

In this lesson we continued making and naming equal shares of rectangles and circles. Your child showed and described how to share 3 muffins equally between 2 children, and 5 muffins equally among 4 children. By solving and discussing problems like these, your child will learn appropriate fraction vocabulary, such as 1 out of 2 equal shares, one-half, 1-third, one-quarter, 1-fourth, and one out of four equal shares. Practice making and naming fractional amounts will continue to the end of the year and will lead to a great deal of work with fractions in *Third Grade Everyday Mathematics*.

Please return this Home Link to school tomorrow.

(1) Divide the rectangle into 4 equal parts.

MRB 132–133

(2) How could you test that the parts are equal?

_____

_____

(3) Use words to name one of the parts in at least two ways.

_____ _____

(4) Use words to name all of the parts together.

_____

Practice

Unit

(5) 73 + 34

(6) 90 − 43

(7) 46 + 36

Measuring Lengths

Home Link 9-4

NAME DATE

Family Note

Today your child measured life-size pictures of objects to the nearest inch and half-inch. Because standard notation for fractions ($\frac{1}{2}$, $\frac{1}{3}$) has not been introduced, we recorded half-inch measures with fraction words such as *one-half* or *1-half.* Pick a few objects and take turns with your child measuring each one to the nearest inch and half-inch. Compare your measurements to ensure they are the same.

Please return this Home Link to school tomorrow.

MRB 100–101

Cut out the 6-inch ruler below. Use it to measure these line segments to the nearest inch.

1. _____ About _____ inches

Measure these line segments to the nearest half-inch.

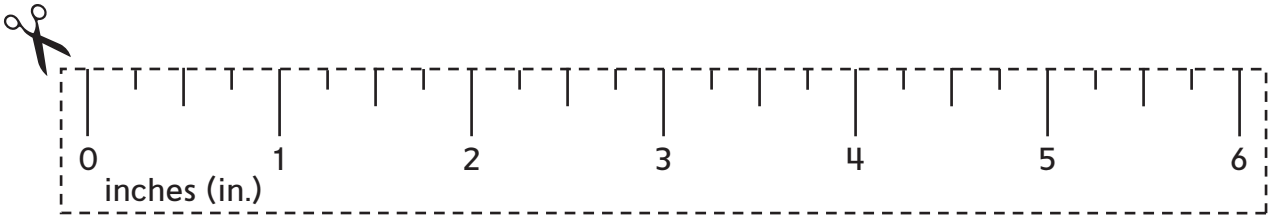
2. _____

   About _____ inches

3. _____ About _____ inches

Measure some objects at home to the nearest half-inch. List the objects and their measurements below.

4. _____
5. _____
6. _____
7. _____



Place Value

Home Link 9-5

NAME DATE

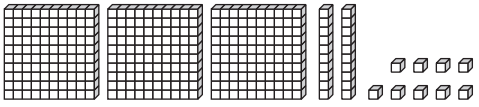
Family Note

In this lesson your child reviewed place value and how it is used to determine the value of digits in numbers. For example, the 5 in 503 is worth 5 hundreds, or 500, because it is in the hundreds place. The 5 in 258 is worth 5 tens, or 50, because it is in the tens place.

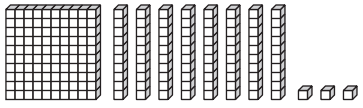
Your child also used place value to compare numbers. For example, to compare 571 and 528, your child might think, "Both numbers have 5 hundreds. But 571 has 7 tens and 528 has only 2 tens. So 571 is the larger number."

Please return this Home Link to school tomorrow.

In Problems 1–2, write the numbers shown by the base-10 blocks. MRB 72–73

1. 

_____

2. 

_____

3. Read the numbers in Problems 1–2 aloud to someone at home.

4. Write each number in expanded form. Then write < or > in the box to compare the two numbers.

491 = _____

471 = _____

491 ☐ 471

Write <, >, or =.

5. 295 ☐ 298

6. 387 ☐ 378

Practice

Unit

Add or subtract.

7. 93 + 65 = _____

8. 80 − 54 = _____

9. 76 + 26 = _____

Making Trades to Subtract

Home Link 9-6

NAME DATE

Family Note

In this lesson your child learned about subtracting multidigit numbers using base-10 blocks. Your child also used ballpark estimates to check whether answers made sense. When using base-10 blocks to subtract, children first check if they need to make any trades. All trades are made before any subtraction is done. Trading first allows children to concentrate on one thing at a time.

Example: 62 − 36 = ?

- Make a ballpark estimate: 62 is close to 60, and 36 is close to 40, so one estimate is 60 − 40 = 20.
- Sketch 62 using base-10 shorthand: 
- Are there enough longs and cubes to remove 3 longs and 6 cubes (36)? No, so you need to trade.
- Trade 1 long for 10 cubes: 
- Does the sketch still show 62? Yes.
- Can we remove the blocks now to help subtract 36? Yes.
- Remove them. 
- Count the longs and cubes that are left. The answer is 26.
- Check to see whether the answer makes sense. The ballpark estimate of 20 is close to the answer of 26, so 26 is a reasonable answer.

Please return this Home Link to school tomorrow or as requested by the teacher.

1

$$\begin{array}{r} 53 \\ -\ 34 \\ \hline \end{array}$$

Ballpark estimate:

_____

Sketch 53 using base-10 shorthand. Solve the problem. Show your work.

Answer: _____

2

$$\begin{array}{r} 64 \\ -\ 28 \\ \hline \end{array}$$

MRB 81

Ballpark estimate:

_____

Sketch 64 using base-10 shorthand. Solve the problem. Show your work.

Answer: _____

Explain to someone how you know your answers make sense.

Expand-and-Trade Subtraction

Home Link 9-7

NAME DATE

Family Note

In this lesson your child subtracted multidigit numbers using expand-and-trade subtraction. Instead of using base-10 blocks, your child used expanded form to think about making trades. Your child continued to use ballpark estimates to check whether answers made sense.

Example: $62 - 36 = ?$

- Write a number sentence to show a ballpark estimate: $60 - 40 = 20$.
- Write each number in expanded form.

$$\begin{array}{rcl} 62 & \rightarrow & 60 + 2 \\ -\ 36 & \rightarrow & 30 + 6 \end{array}$$

- Look at the 10s and 1s. Can you subtract without making trades? No; so trade 1 ten for 10 ones. Cross out 60 (6 tens) and replace it with 50 (5 tens). Cross out 2 (2 ones) and replace it with 12 (12 ones). Then subtract.

$$\begin{array}{rcl} & & \overset{50}{\not 60} + \overset{12}{\not 2} \\ 62 & \rightarrow & \\ -\ 36 & \rightarrow & 30 + 6 \\ & & \overline{20 + 6 = 26} \end{array}$$

  Add the tens and ones to find the total: $20 + 6 = 26$. So $62 - 36 = 26$.
- Compare your answer to your estimate: 20 is close to 26, so 26 is a reasonable answer.

Please return this Home Link to school tomorrow or as requested by the teacher.

MRB 81, 87–89

Use expand-and-trade subtraction to solve. Use a ballpark estimate to check your answer.

① $55 - 37 = ?$

Ballpark estimate:

Solution:

② $81 - 28 = ?$

Ballpark estimate:

Solution:

$55 - 37 =$ _____

$81 - 28 =$ _____

Coin Combinations

Home Link 9-8

NAME DATE

Family Note

In today's lesson children practiced writing money amounts in cents notation and dollar-and-cents notation. In Problem 1, for example, your child might write the value of 10 pennies as 10¢ or $0.10. Your child also showed two different ways to pay for a single item. For example, your child might have shown 62¢ with 2 quarters, 1 dime, and 2 pennies or with 4 dimes, 4 nickels, and 2 pennies. For Problem 2, help your child find items costing less than 99¢ in newspaper or magazine ads and find different combinations of coins to pay for the items.

Please return this Home Link to school tomorrow.

MRB 110–111

1 Pretend that you have 10 of each kind of coin. How much money would you have?

Fill in the blanks.

10 pennies = _____

10 nickels = _____

10 dimes = _____

10 quarters = _____

2 Find two ads in a newspaper or magazine for items that cost less than 99¢ each.

- Ask for permission to cut out the ads.
- Cut them out and paste or tape them onto the back of this page.
- Draw coins to show two different ways to pay for each item with exact change.

(If you can't find ads, draw pictures of items and prices on the back of this page.)

Estimating Total Cost

Home Link 9-9

NAME DATE

Family Note

In this lesson we worked on a problem in which your child pretended to be at a store and needed to estimate the total cost of selected items using mental math. When you are in a store together, choose two or three items and ask your child to try to estimate the total cost without using pencil and paper. Encourage the use of "close-but-easier" numbers for each item to make it easier to find the total cost using mental math.

Please return this Home Link to school tomorrow.

MRB 79

For each problem, pretend you are at a store and do not have a calculator or pencil and paper.

(1) You have $1. You want to buy a toy for 59¢ and an apple for 49¢. Do you have enough money? Tell why or why not.

(2) You have $50. You want to buy a radio for $32, headphones for $18, and a calculator for $6. Do you have enough money? Tell why or why not.

Practice

Unit

Add or subtract.

(3) $\begin{array}{r} 67 \\ -\ 29 \\ \hline \end{array}$

(4) $35 + 56 = \_\_\_\_$

(5) $\begin{array}{r} 71 \\ -\ 46 \\ \hline \end{array}$

Two Equal Groups

Home Link 9-10

NAME DATE

Family Note

In this lesson your child solved problems involving 2 equal groups. In some of the problems, your child needed to find the total number of objects in 2 equal groups.

Example: There are 2 packages of water bottles. Each package has 6 bottles.
How many bottles are there in all?
Answer: 12 bottles

Your child can use doubles facts to help solve these problems. For the above problem, your child might think "What is the double of 6? The double of 6 is 12 because $6 + 6 = 12$."

In other problems, your child needed to share items equally into 2 groups.

Example: You have 10 dishes that you want to put in 2 equal piles.
How many dishes should you put in each pile?
Answer: 5 dishes

Your child can also use doubles facts to help solve these problems. For the above problem, your child might think "Which doubles fact has 10 as the sum? It's $5 + 5 = 10$, so there are 5 in each pile."

Please return this Home Link to school tomorrow.

Solve each problem and write a number model.

MRB 32–33

1 A space alien has 2 hands with 7 fingers on each hand. How many fingers does the space alien have in all?

Answer: _____ fingers
Addition number model:

_____

2 You have 8 shells to give to 2 friends. You give the same number to each friend. How many shells does each get?

Answer: _____ shells
Addition number model:

_____

Practice

Add or subtract.

3 $\begin{array}{r} 77 \\ -19 \\ \hline \end{array}$

4 $47 + 83 =$ _____

5 $\begin{array}{r} 51 \\ -\ 26 \\ \hline \end{array}$

Unit

5s and 10s

Home Link 9-11

NAME DATE

Family Note

In this lesson your child solved problems involving multiples of 10 and 5. A multiple of 5 is the answer to a multiplication problem involving 5 and any counting number. For example, 20 is a multiple of 5 because $5 \times 4 = 20$. The number 20 is also a multiple of 10 because $10 \times 2 = 20$.

The multiples of a number are also the skip counts of that number.

Multiples of 5: 5, 10, 15, 20, . . . **Multiples of 10:** 10, 20, 30, 40, . . .

Dimes and nickels were used as a context for finding multiples of 5 and 10. Your child can solve the problems below by skip counting.

Please return this Home Link to school tomorrow.

MRB 32–33

①	2 nickels = _____ cents	2 [5s] is _____	2 × 5 = _____
	6 nickels = _____ cents	6 [5s] is _____	6 × 5 = _____
②	4 dimes = _____ cents	4 [10s] is _____	4 × 10 = _____
	7 dimes = _____ cents	7 [10s] is _____	7 × 10 = _____
③	8 dimes = _____ cents	8 [10s] is _____	8 × 10 = _____
	8 nickels = _____ cents	8 [5s] is _____	8 × 5 = _____

Practice

Unit

Add or subtract.

④ $\begin{array}{r} 46 \\ +\ 94 \\ \hline \end{array}$

⑤ 92 − 49 = _____

⑥ $\begin{array}{r} 99 \\ +\ 76 \\ \hline \end{array}$

End-of-Year: Family Letter:

Home Link 9-12

NAME DATE

Congratulations!

By completing *Second Grade Everyday Mathematics,* your child has accomplished a great deal. Thank you for your support!

This Family Letter is provided as a resource for you to use throughout your child's vacation. It includes an extended list of Do-Anytime Activities, directions for games that can be played at home, and a sneak preview of what your child will be learning in *Third Grade Everyday Mathematics.* Enjoy your vacation!

Do-Anytime Activities

Mathematics concepts are more meaningful and easier to understand when they are rooted in real-life situations. To help your child review some of the concepts he or she has learned in second grade, we suggest the following activities for you and your child to do together over vacation. Doing so will help your child maintain and build on the skills learned this year and help prepare him or her for *Third Grade Everyday Mathematics.*

1. Pose addition and subtraction number stories about everyday life. For example, ask your child to count the number of grapes he or she has and then ask: *How many will you have if you eat 6 of them? How many will you have if you eat 2 of them and then I eat 3 more?* Here's another example: *If you have 1 quarter, 3 dimes, and 2 nickels, how many cents do you have?*
2. Review and practice addition and subtraction facts. Your child can use Fact Triangle cards to practice or play *Addition Top-It* or *Subtraction Top-It* as described on the second page of this letter.
3. Select everyday objects and have your child estimate their lengths and then measure to check the estimates. Your child could also measure objects to determine how much longer one thing is compared with another.
4. Ask your child to tell you the time to the nearest 5 minutes. Encourage your child to specify whether it is A.M. or P.M.
5. Encourage your child to identify and describe geometric shapes that can be seen in the world. For example: *I see rectangles in that bookcase. They all have 4 right angles.* You can also play *I Spy* to practice identifying and describing shapes. For example: *I spy a shape with 5 sides. All of the sides are the same length.*
6. Ask your child to share food items or other objects fairly with 1, 2, or 3 other people by dividing them into equal shares.
7. Count on or back by 10s and 100s from any given number.

Building Skills Through Games

This section describes games that can be played at home. The number cards used in some games can be made from 3″-by-5″ index cards or from a regular playing-card deck. (Use jacks for zeros and write the numbers 11 through 20 on the four queens, four kings, and two jokers.)

Addition Top-It

Materials 4 cards for each of the numbers 0–10
Players 2 or more
Skill Adding two numbers
Object of the game To have the most cards

Directions

Shuffle the cards and place them facedown in a pile. Each player turns up a pair of cards from the deck and says the sum of the numbers. The player with the greater sum takes all the cards from that round. Players continue turning up cards and saying the sums until there are no more cards left in the draw pile. The player with the most cards at the end of the game wins.

Variation: *Subtraction Top-It*

Add cards for the numbers 11–20 to the *Addition Top-It* deck. Each player turns up a pair of cards from the deck and says the difference between the two numbers. The player with the greater difference takes all the cards from that round.

Salute!

Materials 4 cards for each of the numbers 0–10
Players 3
Skill Finding missing addends
Object of the game To have the most cards

Directions

Shuffle the cards and place them facedown in a pile. One person is the Dealer and gives the two Players one card each. Without looking at the numbers, the Players place the cards on their foreheads facing out, so everyone can see the numbers. The Dealer, who sees both numbers, says the sum of the two cards. The others use the sum and the number on the other card to figure out the number on their foreheads. The Player that finds his or her number first takes both cards. Players rotate roles, with someone new taking over as Dealer in each round. Play continues until everyone has been Dealer five times. The one with the most cards at the end is the winner.

Sample round:

Tom is the Dealer. He gives Raul a 5 and Cheri a 7. Tom looks at both cards and says, "The sum is 12." Raul can see Cheri's 7 and thinks, "What plus 7 is 12?" Raul says, "My number is 5." Because he figures out his number faster than Cheri figures out hers, Raul takes both cards.

Name That Number

Materials 4 cards for each of the numbers 0–10
1 card for each of the numbers 11–20
Players 2 or 3
Skill Adding or subtracting numbers to reach a target number
Object of the game To have the most cards

Directions

Shuffle the cards and place them facedown in a pile. Turn the top five cards faceup and place them in a row. Turn over the next card and place it faceup by the pile. This is the target number.

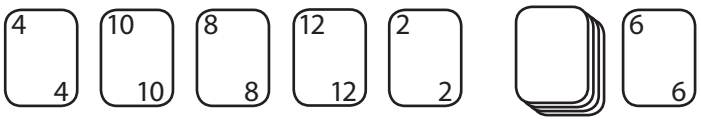
Players take turns trying to name the target number by adding or subtracting the numbers on two or more of the five cards that are faceup. Cards may be used only once for each turn. When a player is unable to name the target number using the faceup cards, his or her turn is over. The target is replaced with a card drawn from the top of the deck.

When players are able to name the target number, they collect the cards they used to name it along with the target-number card. Replacement cards for the five faceup cards are drawn from the deck. The next card from the top of the deck is the new target number.

Play continues until there are not enough cards left in the deck to replace the faceup cards. The player who has collected the most cards wins.

Sample turn:

Mae's turn:



The target number is 6. Mae names it with 12 − 4 − 2. She could also have used 4 + 2 or 8 − 2. Mae takes the 12, 4, 2, and 6 cards. She replaces them by drawing cards from the deck as well as a new target number. Now it is Mike's turn.

Hit the Target

Materials calculator
record sheet (see example below)

Target number: 30

Starting Number	Change	Result	Change	Result	Change	Result
17	+23	40	−10	30		

Players 2
Skill Finding differences between 2-digit numbers and multiples of 10
Object of the game To reach the target number.

Directions

Players agree on a multiple of 10 (10, 20, 30, 40, and so on) as a target number and write it on the record sheet. Player 1 names a starting number that is less than or greater than the target number and records it on the record sheet. Player 2 enters the starting number on a calculator and tries to hit the target number by adding or subtracting a number to it. Player 2 continues adding and subtracting until he or she reaches the target number, recording the change and results on the record sheet. Then players switch roles: Player 2 chooses a starting number and Player 1 tries to change the starting number to the target number by adding and subtracting on the calculator. The player who reaches the target number in fewer tries wins the round.

Sample turn:

Kylie and Aiden agree on 30 as the target number. Kylie chooses 17 as the starting number. Aiden tries to change 17 to 30 by adding 23 but gets a result of 40. He subtracts 10, hitting the target in two tries. His record sheet looks like the one shown on page 284.

Fact Power

Another way addition and subtraction facts can be practiced is by using the Addition/Subtraction Facts Table shown below. The table can also be used to keep a record of facts that have been learned. For example, your child might color the squares for the sums that he or she knows from memory.

+, −	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

Looking Ahead:
Third Grade Everyday Mathematics

Next year your child will . . .

- Learn multiplication facts.
- Explore the relationship between multiplication and division.
- Write number models for addition, subtraction, multiplication, and division number stories.
- Further explore addition and subtraction of 2- and 3-digit numbers.
- Continue partitioning figures and number lines to build an understanding of fractions.
- Tell time to the nearest minute.
- Measure length to the nearest quarter inch.
- Find perimeters and areas of rectangles.
- Further explore the attributes of shapes.

Again, thank you for your support this year. Have fun continuing your child's mathematical adventures throughout the vacation.