

Fact Extensions

Home Link 2-1

NAME _____

DATE _____

TIME _____

Family Note Today your child used basic facts to solve similar problems with larger numbers. These similar problems are known as fact extensions. For example, the basic fact $6 + 7 = 13$ helps solve the fact extension $60 + 70 = 130$. Talk to your child about the patterns in each set of problems. Help your child think of more fact extensions to complete this Home Link.

Please return this Home Link to school tomorrow.

Write the answer for each problem.



① I know: $\begin{array}{r} 9 \\ + 7 \\ \hline \end{array}$ This helps me know: $\begin{array}{r} 19 \\ + 7 \\ \hline \end{array}$ $\begin{array}{r} 69 \\ + 7 \\ \hline \end{array}$ $\begin{array}{r} 99 \\ + 7 \\ \hline \end{array}$

② I know: $\begin{array}{r} 8 \\ + 4 \\ \hline \end{array}$ This helps me know: $\begin{array}{r} 18 \\ + 4 \\ \hline \end{array}$ $\begin{array}{r} 58 \\ + 4 \\ \hline \end{array}$ $\begin{array}{r} 278 \\ + 4 \\ \hline \end{array}$

③ I know: $\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$ This helps me know: $\begin{array}{r} 35 \\ - 7 \\ \hline \end{array}$ $\begin{array}{r} 65 \\ - 7 \\ \hline \end{array}$ $\begin{array}{r} 105 \\ - 7 \\ \hline \end{array}$

④ I know: $\begin{array}{r} 13 \\ - 8 \\ \hline \end{array}$ This helps me know: $\begin{array}{r} 23 \\ - 8 \\ \hline \end{array}$ $\begin{array}{r} 123 \\ - 8 \\ \hline \end{array}$ $\begin{array}{r} 483 \\ - 8 \\ \hline \end{array}$

⑤ I know: $\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$ This helps me know: $\begin{array}{r} 60 \\ + 70 \\ \hline \end{array}$ $\begin{array}{r} 600 \\ + 700 \\ \hline \end{array}$ $\begin{array}{r} 6,000 \\ + 7,000 \\ \hline \end{array}$

Make up another set of fact extensions.

⑥ I know: $\begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array}$ This helps me know: $\begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array}$ $\begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array}$ $\begin{array}{|c|} \hline \square \\ \hline \square \\ \hline \end{array}$

Number Stories

Home Link 2-2

NAME _____

DATE _____

TIME _____

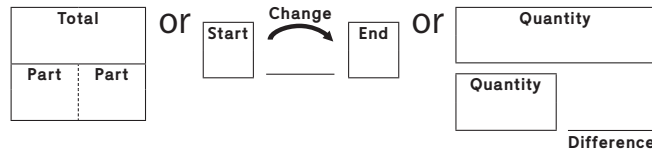
Family Note Today your child reviewed parts-and-total, change, and comparison diagrams. These diagrams help organize the information in a number story. For more information, see *Student Reference Book*, page 76. Remind your child to write the unit with the answer. For example, the problem below asks about the number of cans, so the answer should include cans as the unit.

Please return this Home Link to school tomorrow.

For the problem below:



- Write a number model. Use ? for the unknown.
- You may draw a diagram like the ones shown below or a picture to help.



- Solve the problem and write your answer.
- Explain how you know your answer makes sense.

The second- and third-grade classes collected 750 cans to recycle. The second graders collected 300 cans. How many cans did the third graders collect?

Number model: _____

Answer the question: _____
(unit)

Check: How do you know your answer makes sense?

More Number Stories

Home Link 2-3

NAME _____

DATE _____

TIME _____

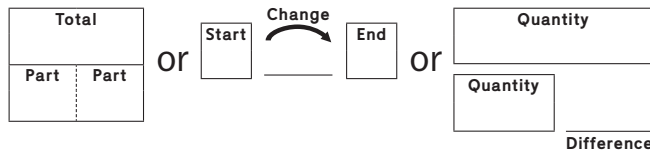
Family Note Today your child solved more number stories using diagrams or pictures to help organize the information in the problems. Remind your child to write the unit with the answer. For example, the unit in the problem below is dollars, which can be represented by the dollar sign (\$). Talk with your child about how he or she knows an answer makes sense.

Please return this Home Link to school tomorrow.

For the number story below:



- Write a number model. Use a ? for the unknown.
- You may draw a diagram like those shown below or a picture to help.



- Solve and write your answer with the unit.
- Explain how you know your answer makes sense.

Jasmine had \$35. She earned some money helping her neighbors. Now she has \$52. How much money did she earn?

Number model: _____

Answer the question: _____
(unit)

Check: How do you know your answer makes sense?

Multistep Number Stories, Part 1

Home Link 2-4

NAME _____

DATE _____

TIME _____

Family Note Today your child practiced solving number stories with two or more steps. These solution strategies often combine at least two different operations (addition, subtraction, multiplication, or division). Children used drawings, words, and number models to help keep track of their thinking. Encourage your child to draw pictures or use objects to act out the stories below. Help your child make sense of each story by asking questions such as: *What do you know from the story? What do you want to find out? What is your plan? What will you do first? Next? Does your answer make sense?*

Please return this Home Link to school tomorrow.

Solve each problem. Draw pictures or use words or number models to help keep track of your thinking. Remember to write the unit.



- ① You have 12 red balloons and 13 blue balloons.
Then 5 balloons pop. How many balloons do you have left?

Answer: _____
(unit)

- ② You have 3 bags of marbles with 6 marbles in each bag.
Then you find 8 more marbles. How many marbles do you have now?

Answer: _____
(unit)

Multistep Number Stories, Part 2

Home Link 2-5

NAME _____

DATE _____

TIME _____



Family Note Today your child practiced solving additional number stories with two or more steps and writing number models for each step. Help your child make sense of the stories below by asking: *What do you know from the story? What do you want to find out? What is your plan? What will you do first? Next? Have you answered the question? Does your answer make sense?*

Please return this Home Link to school tomorrow.

Solve each problem. Show your work with pictures, words, or numbers. Write number models to keep track of your thinking. Remember to write the unit.



- ① Each basket in basketball is worth 2 points. Cathy makes 5 baskets and scores 6 more points with free throws. How many points did she score in all?

Number models: _____

Answer: _____
(unit)

- ② Elias reads 4 chapters. Each chapter has 10 pages. Then he reads 8 more pages. How many pages does Elias read in all?

Number models: _____

Answer: _____
(unit)

Equal-Groups Number Stories

Home Link 2-6

NAME _____

DATE _____

TIME _____

Family Note Today your child practiced using efficient ways to solve equal-groups number stories, such as using repeated addition, skip counting, or using facts he or she knows. Children also talked about what multiplying by 0 or 1 means. Encourage your child to use the number stories to explain why multiplying by 0 equals 0 and multiplying by 1 equals the number in one group.

Please return this Home Link to school tomorrow.

Solve. Show your thinking using drawings, words, or number models.



A pack of Brilliant Color Markers contains 5 markers. Each pack costs \$2.

① If you buy 6 packs, how many markers will you have?

Answer: _____
(unit)

② How much do 0 packs of Brilliant Color Markers cost?

Answer: _____
(unit)

Explain your answer. _____

③ Make up a number story to match the number sentence below:

$$1 \times 5 = 5$$

Representing Situations with Arrays

Home Link 2-7

NAME _____

DATE _____

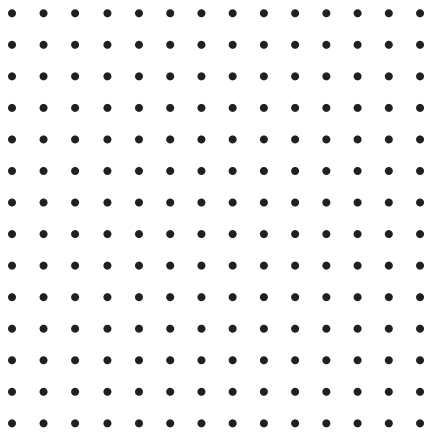
TIME _____

Family Note Today your child practiced drawing arrays to represent number stories. Your child also played *Array Bingo* to practice multiplication facts with arrays and equal groups.

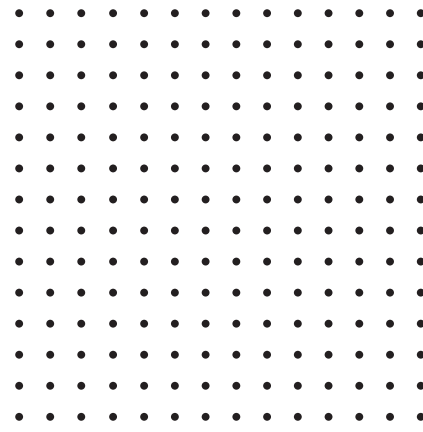
Please return this Home Link to school tomorrow.



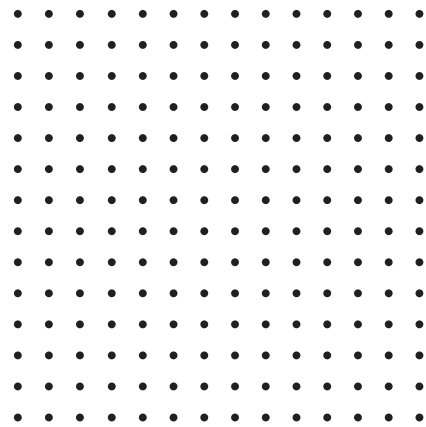
- ① There are 12 trombone players in a parade.
 Show at least 3 different ways they can be arranged into arrays.
 Show your work on the dot grids below.
 Write a number model for each array.



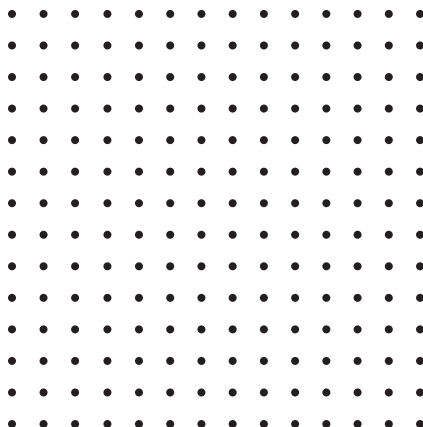
Number model: _____



Number model: _____



Number model: _____



Number model: _____

- ② Can you make an array with 5 rows for the 12 players? Explain. _____

Creating Mathematical Representations

Home Link 2-8

NAME

DATE

TIME

Family Note Your child is learning how to create mathematical representations, such as drawings, words, and number models, to help solve division problems. In this lesson we solved division problems with and without remainders. Talk to your child about the representations he or she can use to help solve Problems 1 and 2 and how to handle the remainder in Problem 2.

Please return this Home Link to school tomorrow.

Solve. Show your thinking in a drawing or number model.



- ① Amit won a pack of 24 stickers in a school contest. He put the stickers into 3 equal piles, one for himself and one each for his friends, Danny and Sue. How many stickers will each get?

Answer: Each gets _____ stickers.

- ② Parents are organizing a field trip to the zoo for Amit's class. They want to take the 23 children in their cars. If each car can carry 5 children, how many cars are needed?

Answer: _____ cars are needed for the field trip.

Modeling with Division

Home Link 2-9

NAME _____

DATE _____

TIME _____

Family Note Today your child solved equal-sharing number stories. Sometimes when we share or divide a quantity, there are parts left over, or remainders. Your child practiced recording division number models with remainders. For example, 10 marbles shared 3 ways could be recorded as $10 \div 3 \rightarrow 3 \text{ R } 1$, which can be read as “10 divided by 3 gives us 3 with a remainder of 1.” Help your child solve the problems below. You may want to use counters, such as coins or dry pasta, to act out each story.

Please return this Home Link to school tomorrow.

Draw pictures to show someone at home how you can use division to solve number stories. Write a number model for each story.



- ① Jamal gives 24 marbles to 4 friends. Each friend gets the same number of marbles. How many marbles does each friend get? _____ (unit)
How many marbles are left over? _____ (unit)

Number model: _____

- ② Eliza has 29 flowers to arrange in 5 vases. She puts the same number of flowers in each vase. How many flowers does she put in each vase? _____ (unit)
How many flowers are left over? _____ (unit)

Number model: _____

- ③ A sheet of stamps has 46 stamps. A complete row has 10 stamps. How many complete rows are there? _____ (unit)
How many stamps are left over? _____ (unit)

Number model: _____

Division with Arrays

Home Link 2-10

NAME _____

DATE _____

TIME _____

Family Note Today your child practiced using arrays to model problems and show division with and without remainders. Children also learned a new game called *Division Arrays*.

Please return this Home Link to school tomorrow.

Use arrays to represent each division problem. If there is a remainder, show it in the Leftovers column.



	Problem	Sketch of Array Formed	Leftovers
Example	$23 \div 6$		
1.	$15 \div 3$		
2.	$32 \div 5$		

- ③ List household items you could share with your family members that might have leftovers, for example, spoons, plates, and cups.

Practice

④ $5 \times 5 = \underline{\hspace{2cm}}$

⑤ $40 = 5 \times \underline{\hspace{2cm}}$

⑥ $20 \div 5 = \underline{\hspace{2cm}}$

⑦ $45 \div \underline{\hspace{2cm}} = 5$

Frames and Arrows

Home Link 2-11

NAME _____

DATE _____

TIME _____

Family Note Today your child reviewed Frames and Arrows, which provide opportunities to look for addition, subtraction, multiplication, or division patterns. Your child used the patterns to fill in missing rules and blank frames.

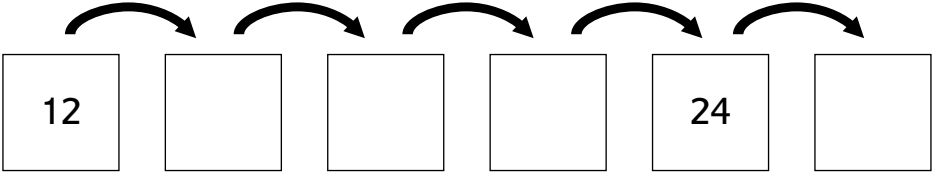
Please return this Home Link to school tomorrow.

Show someone at home how to complete these Frames-and-Arrows diagrams.



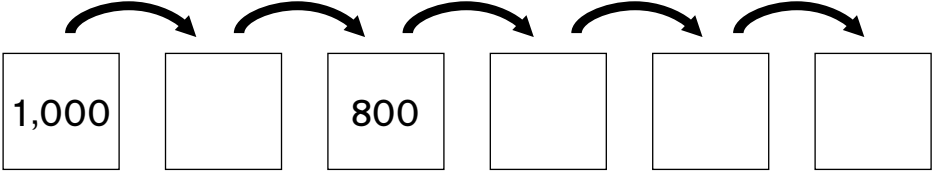
①

Rule
+ 3



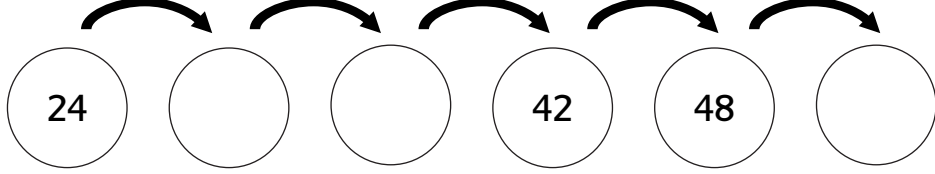
②

Rule
- 100



③

Rule



Practice

Solve.

④ _____ = 6×5

⑤ _____ = 6×10

⑥ $5 \times$ _____ = 20

⑦ $10 \times$ _____ = 40

Liquid Volume and Area

Home Link 2-12

NAME _____

DATE _____

TIME _____

Family Note Today your child explored the ideas of *liquid volume* and *area*. Before your child is exposed to formal work with these measures (such as equivalent units of **liquid volume** or formulas for finding area), it is important to have concrete, exploratory experiences with these measures.

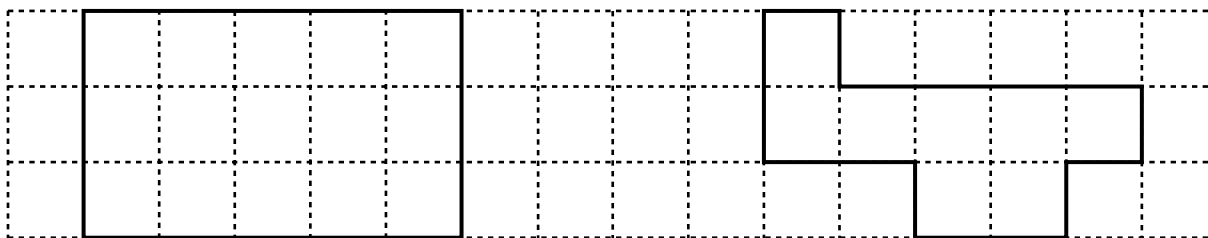
In Problem 1, help your child see that although the glasses may have different dimensions, they can still hold about the same amount of water. In Problem 2, the number of squares that your child counts is the area measurement in square centimeters.

Please return this Home Link to school tomorrow.

- ① Pour some water into a cup at home. Pour all the water from the cup into a bowl. Does the volume or amount of liquid change when you pour it from one container to the other? Explain your thinking.



- ② Count squares to find the area of each figure.



_____ square centimeters

_____ square centimeters

Practice

③ $6 \times 2 = \underline{\hspace{2cm}}$

④ $14 = 2 \times \underline{\hspace{2cm}}$

⑤ $\underline{\hspace{2cm}} = 18 \div 2$

⑥ $16 \div \underline{\hspace{2cm}} = 8$