Unit 5: Family Letter

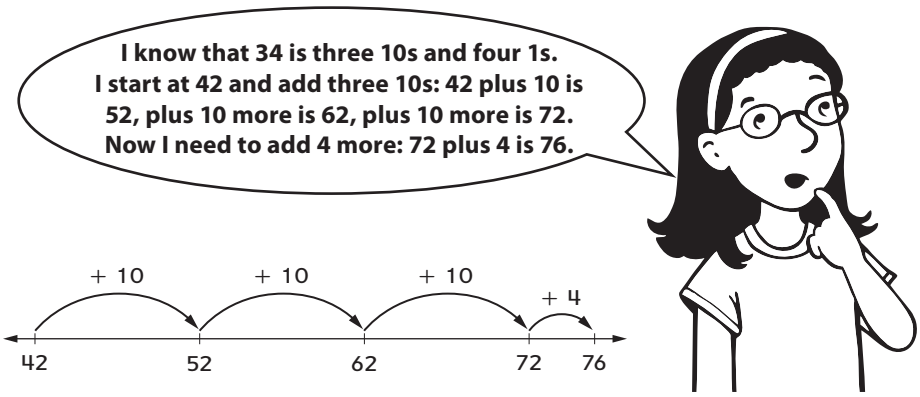
Home Link 4-12

NAME DATE

Addition and Subtraction

In Unit 5 your child will review and extend money concepts. The class will find the total value of combinations of coins, find different coin combinations that have the same total value, and make change.

Your child will also develop mental arithmetic skills, or computations that children do in their heads. As they develop mental arithmetic skills, children may draw pictures or use various tools—such as counters, money, number lines, and number grids—to help them solve problems. In this unit children use a new tool, the **open number line,** to record their mental strategies for adding and subtracting 2-digit numbers. Home Link 5-7 will include more information about open number lines.



A second grader uses an open number line to solve 42 + 34.

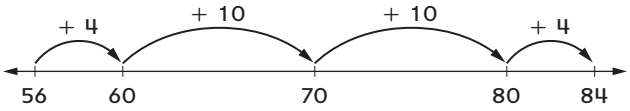
At the end of this unit, children will solve addition and subtraction number stories. Two basic types of addition situations are change-to-more and putting together. Children will use **change diagrams** and **parts-and-total diagrams** to help organize information in addition stories that either "change to more" or "put together." They will also use change diagrams to organize information in stories about temperature changes, which may be either change-to-more (addition) or change-to-less (subtraction) stories. See the Vocabulary section in this Family Letter to see examples and learn more about these diagrams.

Please keep this Family Letter for reference as your child works through Unit 5.

Vocabulary

Important terms in Unit 5:

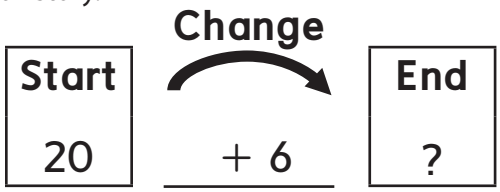
open number line A blank number line on which children can mark points or numbers that are useful for solving problems. Children can use open number lines to record the steps of mental computation strategies. *For example:* I want to solve 56 + 28. I can start at 56 and jump up 4 ones to get to an easy number, 60. I still have 24 more to go. Next I can jump up two 10s, to 70 and then to 80. Now I just have four more 1s to go, so I hop 4 to 84. So 56 + 28 = 84.



change-to-more number story A number story in which a starting quantity is increased so that the ending quantity is more than the starting quantity. *For example:* Nick has 20 comic books. He buys 6 more. How many does he have now?

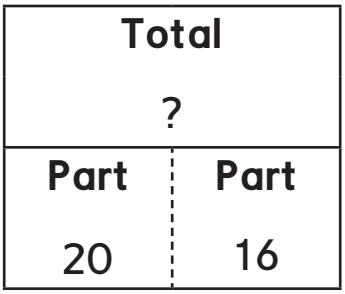
change-to-less number story A number story in which a starting quantity is decreased so that the ending quantity is less than the starting quantity. *For example:* Abby has 12 berries. She eats 5 of them. How many does she have now?

change diagram A diagram that organizes information from a change-to-more or change-to-less number story. The following change diagram organizes the information from Nick's comic book story.



parts-and-total number story A number story in which two or more quantities (parts) are combined to form a total quantity. *For example:* Carl filled 20 gift bags. Sam filled 16 gift bags. How many gift bags did Carl and Sam fill in all?

parts-and-total diagram A diagram that organizes information from a parts-and-total number story. The following parts-and-total diagram organizes the information from Carl and Sam's gift bag story.



Do-Anytime Activities

To work with your child on the concepts taught in this unit and previous units, try these interesting and rewarding activities:

1. Challenge your child to solve an addition or a subtraction fact faster than you can solve it on a calculator.
2. At the grocery store, show your child an item that costs less than $1. Ask your child what coins or bills he or she would use to pay for the item and how much change the cashier would give back.
3. Pose addition or subtraction problems for your child to solve mentally. Encourage your child to draw an open number line to show his or her problem-solving steps.
4. Look at weather reports in the newspaper, on television, or online. Have your child figure out the difference between the high and low temperatures for each day.
5. Look at temperatures at different points during the day. Ask your child to determine whether the temperature has changed to more or changed to less.

Building Skills through Games

In Unit 5 your child will play the following games to practice solving facts, exchanging coins, and adding and subtracting mentally and with tools.

Beat the Calculator

One player is the Caller, who names two 1-digit numbers. Another player is the Brain, who adds the two numbers mentally. A third player is the Calculator, who adds the numbers with a calculator. The Brain tries to find the sum faster than the Calculator.

Spinning for Money

Players take turns spinning a spinner and taking the indicated coins from the bank. Whenever they can, players exchange their coins for coins in larger denominations (for example, 5 pennies for 1 nickel). The first player to exchange coins for a $1 bill wins.

Target

Players draw number cards to create 1- and 2-digit numbers and use base-10 blocks to represent them. Players add or subtract each new number from their current total until the blocks on one player's mat have a value of exactly 50.

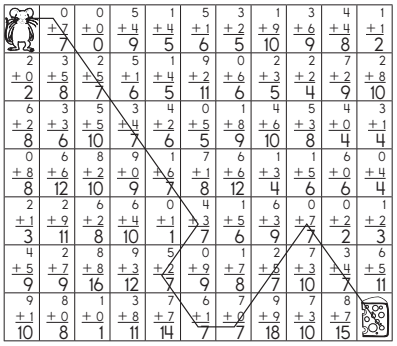
Addition/Subtraction Spin

Players spin a spinner to determine a 3-digit number. Then they roll a die to see if they should add 10 or 100 to the 3-digit number or subtract 10 or 100 from it. Players do the computation mentally.

As You Help Your Child with Homework

As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through the Unit 5 Home Links.

Home Link 5-1



Home Link 5-2

1–3. Answers vary.

4. 9 **5.** 7 **6.** 13 **7.** 16

Home Link 5-3

1–4. Answers vary.

5. 3 **6.** 7 **7.** 7 **8.** 5

Home Link 5-4

5¢; 35¢; 16¢; 5¢; 2¢; 52¢; Answers vary.

1. 3 **2.** 7 **3.** 3 **4.** 6

Home Link 5-5

1. 8:30 **2.** 4:15 **3.** 1:40

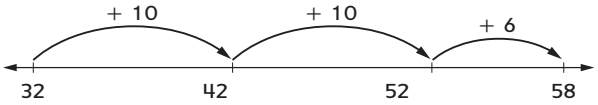
4. 7:10 **5.** 11 **6.** 4

Home Link 5-6

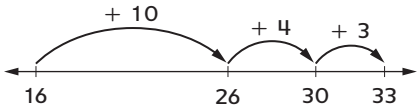
1. 72	**2.** 48	**3.** 126
4. 381	**5.** 886	**6.** 525
7. 34	**8.** 205	**9.** 9
10. 7	**11.** 6	**12.** 3

Home Link 5-7

1. 58; Sample number line:



2. 33; Sample number line:



Home Link 5-8

1.

Start	Change	End
11	+ 7	?

11 + 7 = ?; 18 grapes

2.

Start	Change	End
30	+ 8	?

30 + 8 = ?; 38 cards

3.

Start	Change	End
42	+ 10	?

42 + 10 = ?; 52 pounds

Home Link 5-9

1.

Total	
?	
Part	Part
17	30

17 + 30 = ?; 47 pounds

2.

Total	
?	
Part	Part
45	30

45 + 30 = ?; 75 pounds

3.

Total	
?	
Part	Part
17	15

17 + 15 = ?; 32 pounds

Home Link 5-10

1.

Start	Change	End
30	+ ?	42

30 + ? = 42; 12°F

2.

Start	Change	End
65	− ?	50

65 − ? = 50; 15°F

3. Sample answer: I counted up from 50 to 65 and got 15.

Home Link 5-11

1. Strategies vary; $50

2. Strategies vary; $50