

### Money Jar

The Franklins save their pennies, nickels, and dimes in a jar in the family room. The father, Frank, and the mother, Flora, have four children—Frankie Franklin, Fred Franklin, Fern Franklin, and Ben Franklin. On the first Friday of each month, the Franklins divide the coins in the jar among the members of the family. They use the following rules:



- The children always share the pennies equally.
- The other coins are divided equally among all the members of the family.
- Any money that cannot be divided equally is put back into the jar.

Write number sentences to show how you solved each problem.

- In January there were 24 pennies.
  - How many pennies did each child get?
  - How many pennies did they put back in the jar?
- In January there were 18 dimes.
  - How many dimes did each family member get?
  - How many dimes did they put back in the jar?
  - How much money did each person get in dimes?
- In January there were 22 nickels.
  - How many nickels did each family member get?
  - How many nickels did they put back in the jar?
  - How much money did each person get in nickels?
- In February their cousin Farley came to visit the family. There were 32 pennies in the jar.
  - How many pennies did each of the five children get?
  - How many pennies did they put back in the jar?

Copyright © Kendall Hunt Publishing Company

### Student Guide

#### Questions 1–12 (SG pp. 290–292)

One or two possible number sentences are given for each question. Accept other sentences such as multiplication or repeated subtraction. Students are asked for only one sentence.

- $24 \text{ pennies} \div 4 = 6 \text{ pennies}$  or  $4 \times 6 \text{ pennies} = 24 \text{ pennies}$
  - 0 pennies returned to the jar
- $18 \div 6 = 3 \text{ dimes}$  or  $18 - 6 - 6 - 6 = 0 \text{ dimes}$
  - $0 \text{ dimes put back in the jar}$
  - $3 \times 10\text{¢} = 30\text{¢}$  or  $10\text{¢} + 10\text{¢} + 10\text{¢} = 30\text{¢}$
- $3 \text{ nickels}$ ;  $22 \div 6 = 3 \text{ R}4$  or  $6 \times 3 + 4 = 22 \text{ nickels}$
  - $4 \text{ nickels put back in the jar}$
  - $3 \times 5\text{¢} = 15\text{¢}$
- $6 \text{ pennies}$ ;  $32 \div 5 = 6 \text{ R}2$  or  $6 \times 5 + 2 = 32 \text{ pennies}$
  - 2 pennies put back in the jar

5. **A.** 5 dimes;  $35 \div 7 = 5$  or  $7 \times 5 = 35$  dimes  
**B.** 0 dimes put back in the jar  
**C.**  $5 \times 10\text{¢} = 50\text{¢}$
6. **A.\*** 9 pennies;  $38 \div 4 = 9$  R2 or  $4 \times 9 + 2 = 38$  pennies  
**B.\*** 2 pennies put back in the jar
7. **A.** Possible response: The 38 stands for the 38 pennies in the jar. The division sign means that the children divide the pennies fairly. The 4 is for the number of children. The 9 is the number of pennies each child got. The R means remainder or leftovers. There are 2 pennies left over.  
**B.** Possible response: Frankie thought about multiplication. The 4 is for the number of kids. The 9 is for the number of pennies that each kid got. The  $\times$  is for multiplication. 4 groups of 9 pennies is 36 all together. So, Frankie subtracted the 36 pennies that the kids got from the 38 pennies in the jar. There are 2 pennies left over.  
**C.** Possible response: The 4 is for the number of kids in the family. The 9 is for the number of pennies each kid got. 4 multiplied by 9 is only 36, so Ben added 2 more to get the total number of pennies in the jar, 38. The 2 pennies go back in the jar for next month.
8. **A.** 5 dimes;  $31 \div 6 = 5$  R1 or  $6 \times 5 + 1 = 31$   
**B.**  $5 \times 10\text{¢} = 50\text{¢}$   
**C.** 1 dime or 10¢ returned to the jar
9.  $4 \times 11 = 44$  pennies. Students could say there are up to 47 pennies if there were pennies left to return to the jar.
10. **A.\*** 2 dimes or 20¢;  $15 \div 6 = 2$  R3  
**B.\*** 3 dimes or 30¢ returned to the jar  
**C.\*** Trade the 3 dimes for 6 nickels.  $6 \div 6 = 1$ . Everyone gets another nickel.
11. **A.** parents—3 dimes or 30¢;  
 19 dimes  $\div$  6 people; 3 dimes R1  
 19 pennies  $\div$  4 people = 4 pennies R3  
 children—3 dimes and 4 pennies or 34¢  
**B.** 1 dime and 3 pennies returned to the jar
12. **A.\*** No;  $28 \div 4 = 7$  pennies for each child; no pennies returned to the jar  
**B.** Yes;  $4 \times 10 = 40$ , so there would be 2 pennies left over.


**Homework (SG p. 292)**

Homework answers will vary.

\*Answers and/or discussion are included in the lesson.

5. In February there were 35 dimes. (Do not forget Farley!)

- How many dimes did each of the seven family members get?
- How many dimes did they put back in the jar?
- How much money did each person get in dimes?

**Discuss** 

6. In March there were 38 pennies in the jar. (Farley went home.)

- How many pennies did each of the four children get?
- How many pennies did they put back in the jar?

Flora, Frankie, and Ben wrote number sentences to show how they divided the pennies in March.

<b>Flora wrote:</b>	<b>Frankie wrote:</b>	<b>Ben wrote:</b>
$38 \div 4 = 9$ R2	$4 \times 9 = 36$ $38 - 36 = 2$	$4 \times 9 + 2 = 38$

- Look at Flora's solution. Explain what she did to solve the problem.
- Look at Frankie's solution. Explain what he did to solve the problem.
- Look at Ben's solution. Explain what he did to solve the problem.

8. In April there were 31 dimes in the jar.

- How many dimes did each person get?
- How much money did each person get?
- How much money was put back in the jar?

9. If each child got 11 pennies in May, how many pennies were in the jar?

Copyright © Kendall Hunt Publishing Company

Money Jar SG • Grade 3 • Unit 10 • Lesson 4 **291**

**Student Guide - Page 291**

10. In June there were 15 dimes.


- How much money did each person get?
- How much money did they put back in the jar?
- Is there a way to divide the money that was returned to the jar? (Hint: The dimes may be traded for other coins.)

✓ **Check-In: Questions 11-12**

11. In July there were 19 dimes and 19 pennies.

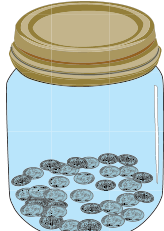
- How much money did each family member get?
- How much money was put back in the jar?

12. **A.** If there were 28 pennies in the jar in August, would there be pennies to put back in the jar for September? Explain.  
**B.** If there were 42 pennies in the jar in September, would there be pennies to put back in the jar? Explain.

**Homework** 

Your family decides to save coins in a money jar and divide them evenly among the members of your family each month. One month your family finds 36 dimes in the jar. How much money will each member of your family get? How much money will be left over? Write number sentences to show your solution to the problem. You can solve this problem at home using counters such as beans, checkers, or coins.

Use the **Addition Strategies Menu** and the **Subtraction Strategies Menu** in the **Student Guide Reference section**.



Copyright © Kendall Hunt Publishing Company

292 SG • Grade 3 • Unit 10 • Lesson 4 Money Jar

**Student Guide - Page 292**