

Preliminary Planning Sheet Grade 4 – Grandfather's Wallet

Domain(s)

Number and Operations in Base Ten¹

Standard(s)

4.NBT.B.6

Mathematical Practices

MP.1 MP.2 MP.3 MP.4 MP.5 MP.6

Major Underlying Mathematical Concepts

- Find whole number quotients and remainders with up to 4 digit dividends and 1 digit divisors
- Money notation
- Number sense to \$49.00
- Equal shares

Problem Solving Strategies

- Model (manipulatives)
- Diagram/Key
- Table
- Tally chart
- Array

Formal Mathematical Language and Symbolic Notation

- | | |
|--------------------------|----------------------------------|
| • Model | • Odd/Even |
| • Diagram/Key | • 1/4 |
| • Table | • 0.25 |
| • Tally chart | • Dozen |
| • Array | • Equivalent/Equal to |
| • Dollar, quarter | • Equal share |
| • Money notation (\$, .) | • Total/Sum |
| • Multiples | • Greater than (>)/Less than (<) |
| • Per | |

Possible Solution(s)

Jane is correct.

$$\begin{array}{r} 12 \text{ r}1 \\ 4 \overline{) 49} \\ \underline{- 40} \quad 10 \\ 9 \\ \underline{- 8} \quad 2 \\ 1 \quad 12\text{r}1 \end{array}$$

$$\begin{array}{r} \$0.25 \\ 4 \overline{) \$1.00} \\ \underline{- 80} \quad 20 \\ 20 \\ \underline{- 20} \quad 5 \\ 0 \quad 25 \end{array}$$

Child	Dollars
Gianna	
Zack	
Ryan	
Jane	

$$\begin{aligned} 49 \div 4 &= \\ (40 \div 4) + (9 \div 4) &= \\ 10 + 2\text{r}1 &= 12 \text{ r}1 \\ \$10.00 + \$2.00 &= \$12.00 \\ \$1.00 \div 4 &= \$0.25 \\ \$2.00 + \$0.25 &= \$12.25 \end{aligned}$$

Remaining Dollar			
25¢	25¢	25¢	25¢
Gianna	Zack	Ryan	Jane

Possible Connections

Below are some examples of mathematical connections. Your students may discover some that are not on this list.

- Multiples of 4 are even. 49 is an odd number of dollars, so there must be a remainder.
- The children each receive a total of a dozen dollars, plus 1/4 of dollar or 0.25 of a dollar.
- If there are more children they will receive less money. For example, if there are 5 children they will each receive \$9.80.
- You can not always share a remainder equally. For example, 49 books can not be shared equally, because you can not divide a book into pieces.
- Relate to a similar task and state a math link.
- Solve more than one way to verify the answer.
- If grandfather had 1 more dollar for a total of \$50, each child would receive \$12.50.