Describing Remainders as Decimals
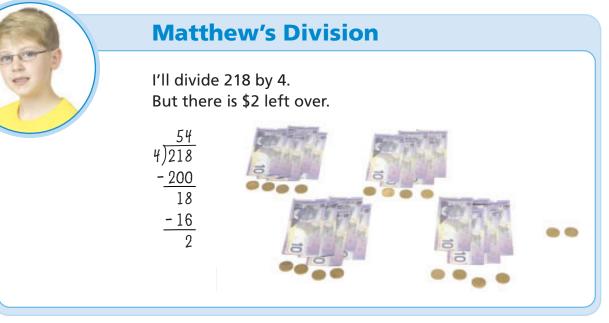
You will need
• play money

GOAL

Solve division problems with decimal remainders.

Matthew and three of his friends earned $218 by doing chores for their neighbours. They want to share their earnings equally.

How much money will each friend get?

Matthew's Division

I'll divide 218 by 4.
But there is $2 left over.

$$
\begin{array}{r}
54 \\
4)\overline{218} \\
-\ 200 \\
\hline
18 \\
-\ 16 \\
\hline
2
\end{array}
$$

A. How can Matthew share the remaining $2 using coins?

B. How many dollars will each friend receive? How many cents will each friend receive?

Reflecting

C. How can you write each share using decimals?

D. Why does it make sense to rename the $2 so that you can write the remainder as a decimal?

Checking

1. Five friends will share equally the $148 they earned.
a) Estimate each share.
b) Calculate each share in dollars and cents. Write your answer as a decimal.

Practising

2. A set of four badminton rackets costs $97. Four friends plan to share the set.
a) Estimate how much money each friend will need.
b) Calculate how much money each friend will need. Show your work.

3. Mitchell bought 10 flower pots for $71.
a) He said that each pot cost $7 R1. Why should he write the remainder as a decimal?
b) What is the cost of each pot?

4. Jackson wants to cut 10 m of wool into eight equal strips. How long will each strip be? Record the remainder as a decimal number of metres.

5. A whole number of dollars is being shared by five people.
a) If they are sharing $26, why would both dollars and cents be used for the amount each person receives?
b) If each person receives $▢▢.80, what might the original amount have been?