Explore

Each sheet of this photo album holds 8 photos.
Evan has 325 photos.
How many sheets does he need?
How many different ways can you find out?
Show your work for each strategy you use.
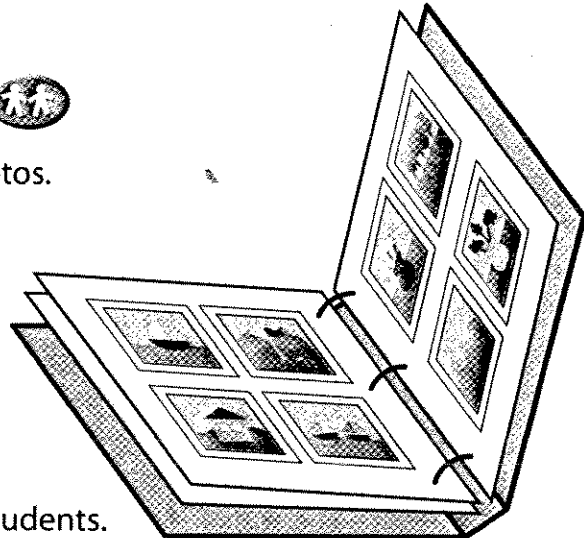
Show *and* Share

Share your strategies with another pair of students.

Connect

Three children share $1.25 equally. How much does each child get?

Change $1.25 to 125¢.
To find out how much each child gets, divide: 125 ÷ 3
Here are two strategies students used to find the quotient.

➤ Emma used Base Ten Blocks.

She traded the hundred flat for 10 rods.

Emma then arranged the 12 rods and 5 unit cubes into 3 equal groups.

There are 2 cubes left over.
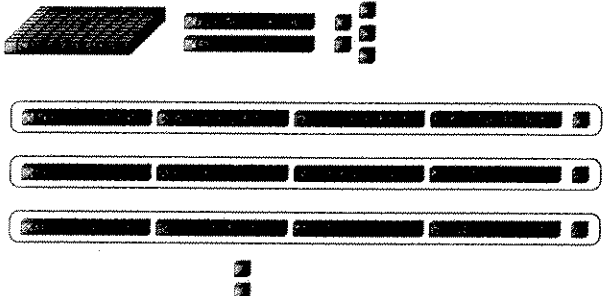
So, 125 ÷ 3 = 41 R2

Each group has 41.

➤ Amil uses repeated subtraction to divide.
He subtracts multiples of the divisor.
Multiples of 3 are: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, …
Write $125 \div 3$ as $3\overline{)125}$.
Choose any multiple of 3 less than 125.
Start with 30. Subtract 30.

$$
\begin{array}{r}
3\overline{)125} \\
-30 \\
\hline
95
\end{array}
\quad 10
$$

30 is a multiple of 3. When I subtract 30, I am subtracting 3 ten times. So, I write 10 at the side.
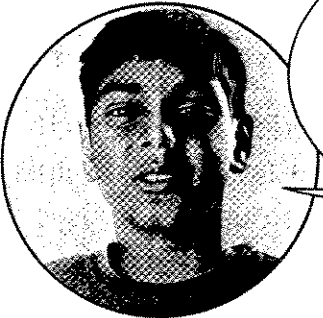
Then subtract 90.

$$
\begin{array}{r}
3\overline{)125} \\
-30 \\
\hline
95 \\
-90 \\
\hline
5
\end{array}
\quad
\begin{array}{l}
10 \\
\\
30
\end{array}
$$

90 is a multiple of 3. When I subtract 90, I am subtracting 3 thirty times. So, I write 30 at the side.

Then subtract 3.

$$
\begin{array}{r}
3\overline{)125} \\
-30 \\
\hline
95 \\
-90 \\
\hline
5 \\
-3 \\
\hline
2
\end{array}
\quad
\begin{array}{l}
10 \\
\\
30 \\
\\
1 \\
\hline
41
\end{array}
$$

*When I subtract 3, I write 1 at the side, because $3 \times 1 = 3$.
I add the numbers at the side.
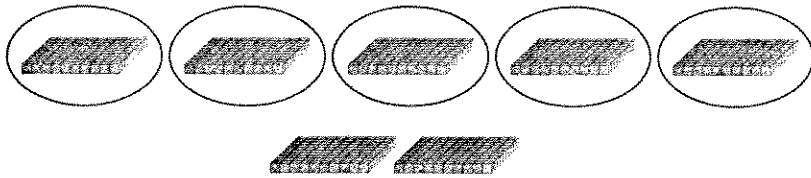$3\overline{)125}$ is 41 with 2 left over.*

$125 \div 3 = 41$ R2
Each child gets 41¢. There are 2¢ left over.
We ignore the remainder because each child must have the same amount.

➤ Use Base Ten Blocks and place value to divide: $728 \div 5$

Divide 7 hundreds into 5 equal groups.

```
    h t o
    1
 5)7 2 8
   -5
    2
```

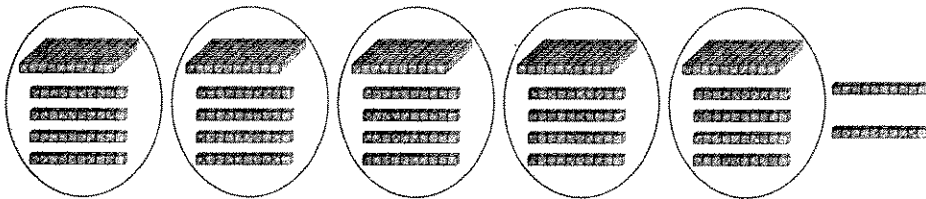There are 1 hundred in each group, with 2 hundreds left over.

Trade the 2 hundred flats for 20 ten rods.
There are now 22 ten rods.

Divide the 22 ten rods among the 5 equal groups.
There are now 1 hundred 4 tens in each group, with 2 tens left over.

```
    h t o
    1 4
 5)7 2 8
   -5
    2 2
   -2 0
      2
```
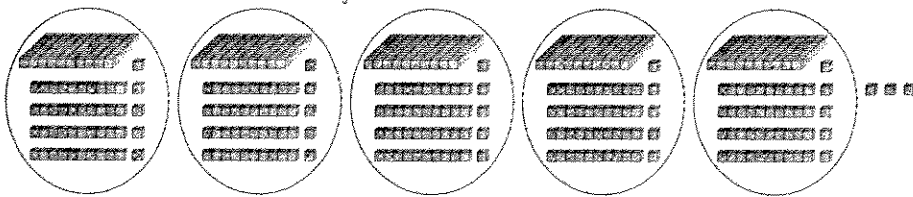
Trade the 2 ten rods for 20 unit cubes.
There are now 28 unit cubes.

Divide the 28 cubes among the 5 equal groups.
There are now 1 hundred 4 tens 5 ones in each group,
with 3 ones left over.

```
    h t o
    1 4 5
 5)7 2 8
   -5
    2 2
   -2 0
      2 8
     -2 5
        3
```

There are 145 in each group, with 3 left over.
So, $728 \div 5 = 145$ R3