Division Procedure

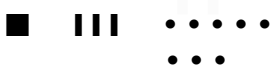
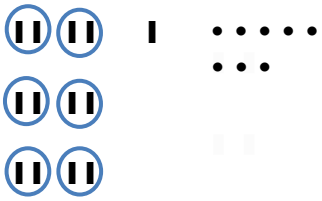
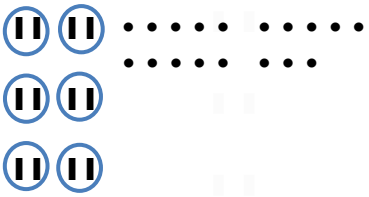
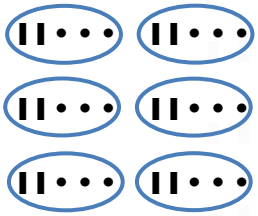
Use What You've Learned
Answers and Explanations

Directions:

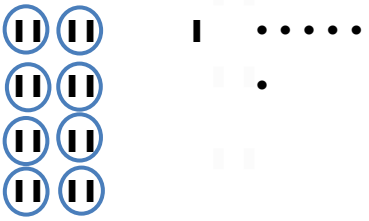
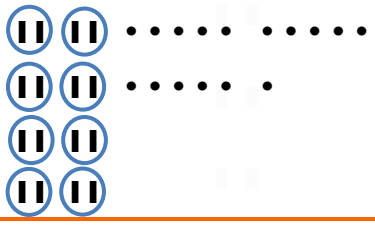
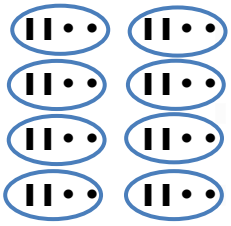
- Solve each of the following division problems with a model. You may use pennies, dimes, and dollars to represent ones, tens, and hundreds or you may print and cut out paper base ten blocks.
- Go through the steps you used to solve the problem with a model a second time and record each step with paper and pencil.

■ represents 100 ❙ represents 10 • represents one

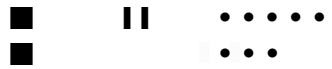
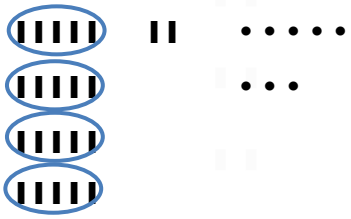
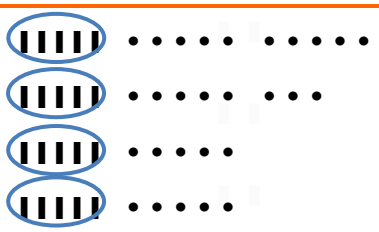
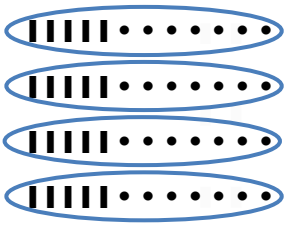
1. Shannon's dad brought Shannon and five of her friends to the water park. It cost a total of $138 for all six girls. What is the admission fee for one girl?

Actions	Base 10 Blocks	Paper & Pencil Procedure
Represent 138. To solve this problem, divide 138 into 6 equal groups.		$6\overline{)138}$
In order to divide 1 hundred into 6 groups, trade the hundred for 10 tens. Now there are 13 tens.		$6\overline{)138}$
Share the tens. How many tens are in each group? (2 tens) Record. How many tens did you share? (12 tens) Record. How many tens are left to share? (1 ten) Record.		$6\overline{)138}$ 2 12 1
In order to divide 1 ten into 6 groups, trade the ten for 10 ones. Now there are 18 ones to share. Record.		$6\overline{)138}$ 2 12 18
Share the ones. How many ones are in each group? (3) Record. How many ones did you share? (18) Record. What is left to share? (0) The admission fee for one girl is $23.		$6\overline{)138}$ 23 12 18 18 0

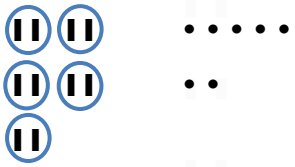
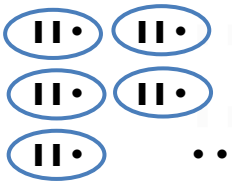
2. Sam and Ella collected stamps and put them into an album. They put a total of 176 stamps on eight pages. If they put the same number of stamps on each page, how many pages did they use?

Actions	Base 10 Blocks	Paper & Pencil Procedure
Represent 176. To solve this problem, divide 176 into 8 equal groups.		$8\overline{)176}$
In order to divide 1 hundred into 8 groups, trade the hundred for 10 tens. Now there are 16 tens.		$8\overline{)176}$
Share the tens. How many tens are in each group? (2 tens) Record. How many tens did you share? (16 tens) Record. How many tens are left to share? (1 ten) Record.		$\begin{array}{r} 2 \\ 8\overline{)176} \\ \underline{16} \\ 1 \end{array}$
In order to divide 1 ten into 8 groups, trade the ten for 10 ones. Now there are 16 ones to share. Record.		$\begin{array}{r} 2 \\ 8\overline{)176} \\ \underline{16} \\ 16 \end{array}$
Share the ones. How many ones are in each group? (2) Record. How many ones did you share? (16) Record. What is left to share? (0) Sam and Ella used 22 pages.		$\begin{array}{r} 22 \\ 8\overline{)176} \\ \underline{16} \\ 16 \\ \underline{16} \\ 0 \end{array}$

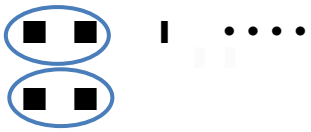
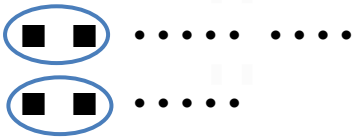
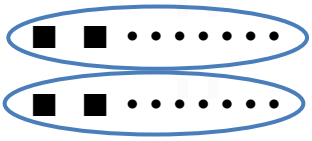
3. Marty wants to buy an iPod touch for $228. He thinks he can earn enough money to buy the iPod touch in four weeks. How much money does he need to earn each week?

Actions	Base 10 Blocks	Paper & Pencil Procedure
Represent 228. To solve this problem, divide 228 into 4 equal groups.		$4\overline{)228}$
In order to divide 2 hundred into 4 groups, trade the 2 hundreds for 20 tens. Now there are 22 tens.		$4\overline{)228}$
Share the tens. How many tens are in each group? (5 tens) Record. How many tens did you share? (20 tens) Record. How many tens are left to share? (2 tens) Record.		$\begin{array}{r} 5 \\ 4\overline{)228} \\ 20 \\ \hline 2 \end{array}$
In order to divide 2 tens into 4 groups, trade the tens for 20 ones. Now there are 28 ones to share. Record.		$\begin{array}{r} 5 \\ 4\overline{)228} \\ 20 \\ \hline 28 \end{array}$
Share the ones. How many ones are in each group? (7) Record. How many ones did you share? (28) Record. What is left to share? (0) Marty needs to earn $57 each week.		$\begin{array}{r} 57 \\ 4\overline{)228} \\ 20 \\ \hline 28 \\ 28 \\ \hline 0 \end{array}$

4. Larry bought a container of 107 glass marbles at an antique store. He split the marbles equally among his five grandchildren. How many marbles did each receive?

Actions	Base 10 Blocks	Paper & Pencil Procedure
Represent 107. To solve this problem, divide 107 into 5 equal groups.		$5\overline{)107}$
In order to divide 1 hundred into 5 groups, trade the hundred for 10 tens.		$5\overline{)107}$
Share the tens. How many tens are in each group? (2 tens) Record. How many tens did you share? (10 tens) Record. How many tens are left to share? (0) How many ones are left to share? (7) Record.		$\begin{array}{r} 2 \\ 5\overline{)107} \\ \underline{10} \\ 7 \end{array}$
Share the ones. How many ones are in each group? (1) Record. How many ones did you share? (5) Record. What is left to share? (2) Each grandchild received 21 marbles and 2 marbles are left.		$\begin{array}{r} 21 \\ 5\overline{)107} \\ \underline{10} \\ 7 \\ \underline{5} \\ 2 \end{array}$

5. Max drove to his friend's house and home again. He put 414 miles on his car. How many miles does Max live from his friend?

Actions	Base 10 Blocks	Paper & Pencil Procedure
Represent 414. To solve this problem, divide 414 into 2 equal groups (the miles Max drove to his friend's home and the miles he drove back home).		$2\overline{)414}$
Share the hundreds. How many hundreds are in each group? (2 hundreds) Record. How many hundreds did you share? (4 hundreds) Record. How many hundreds are left to share? (0)		$\begin{array}{r} 2 \\ 2\overline{)414} \\ \underline{4} \end{array}$
Think about sharing the tens. How many tens are there? (1 ten) Record. How many tens can you put in each group? (0) Record a 0 to show that there are 0 tens in each group.		$\begin{array}{r} 20 \\ 2\overline{)414} \\ \underline{4} \\ 1 \end{array}$
In order to divide 1 ten into 2 groups, trade the ten for 10 ones. Now there are 14 ones to share. Record.		$\begin{array}{r} 20 \\ 2\overline{)414} \\ \underline{4} \\ 14 \end{array}$
Share the ones. How many ones are in each group? (7) Record. How many ones did you share? (14) Record. What is left to share? (0) Max lives 207 miles from his friend.		$\begin{array}{r} 207 \\ 2\overline{)414} \\ \underline{4} \\ 14 \\ \underline{14} \\ 0 \end{array}$