LEARN: Long Division (Placeholder Worksheet)

This placeholder worksheet answer key is for demonstration purposes. Answers are in purple.

Looking Back

You have learned to perform short form division by counting how many times one value can fit into another.

15 ÷ 3

How many times can 3 go into 15?

Answer: ___5 times_____

However, this method is not very practical for large numbers.

320 ÷ 3

Counting how many times 3 goes into 320 would take a very long time.

For large numbers, we can use **long division** to break up the problem into easier steps.
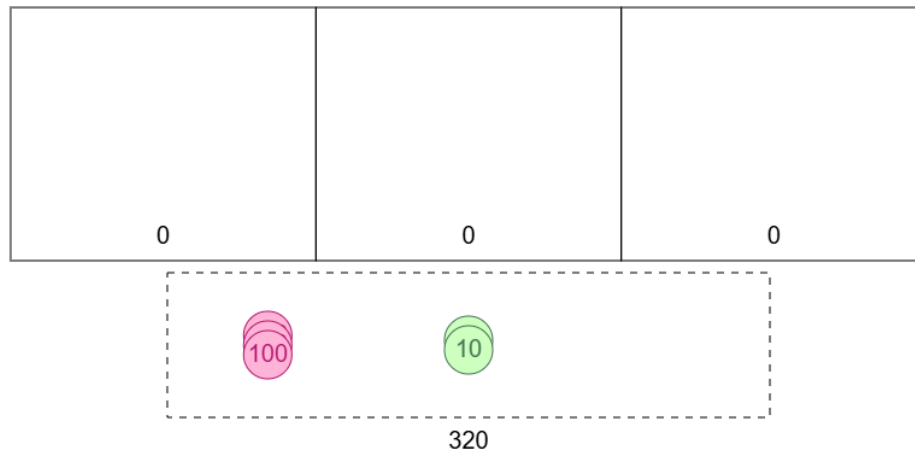
Warm Up

300 = 3 hundreds.
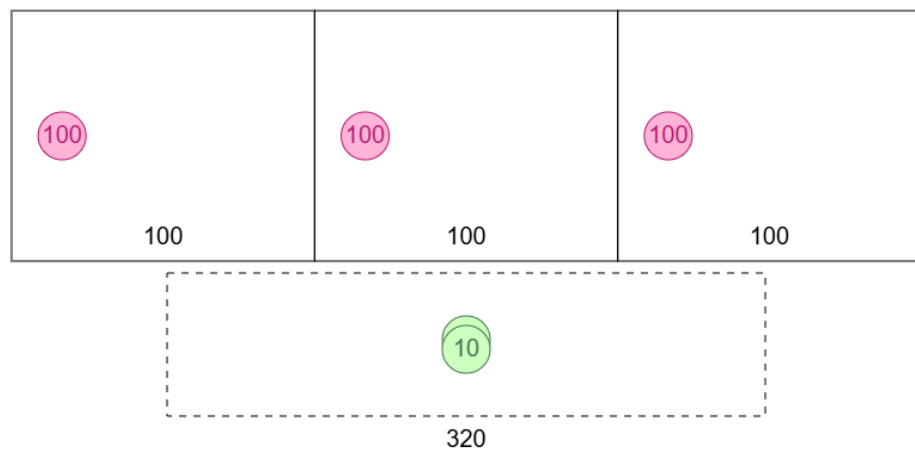3 hundreds ÷ 3 = ___1_____ hundred

320 is 3 hundreds, 2 tens, and 0 ones.

Start by dividing the hundreds. Divide 3 hundreds into 3 groups. How many hundreds goes in each group?
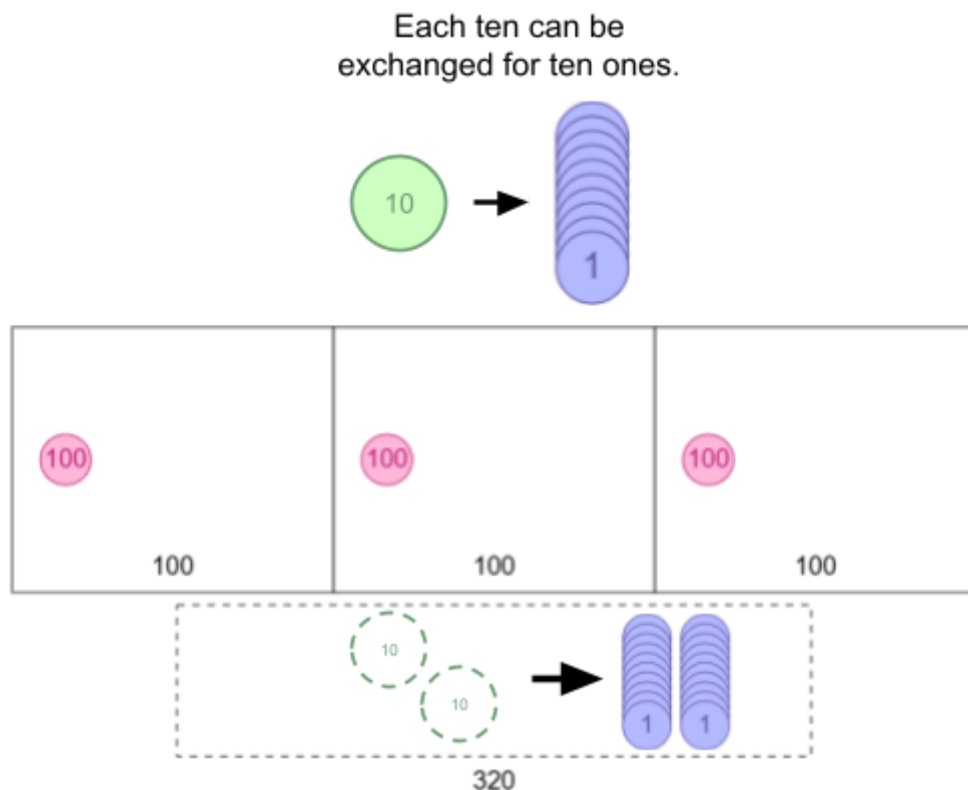
Answer: __1 hundred_____

Put one hundred in each group.

Next, divide the tens. Can 2 tens be divided into 3 groups? Why or why not?
Answer:
No, because 2 is too few to be divided into 3 groups.

2 tens cannot be divided into 3 groups. The tens need to be broken up into smaller pieces so that they can be divided.

Each ten can be
exchanged for ten ones.

2 tens is the same value as how many ones?

Answer: 2 tens = _____20_____ ones

When dividing, why does it help to break up large things into smaller pieces? Give a real world example.
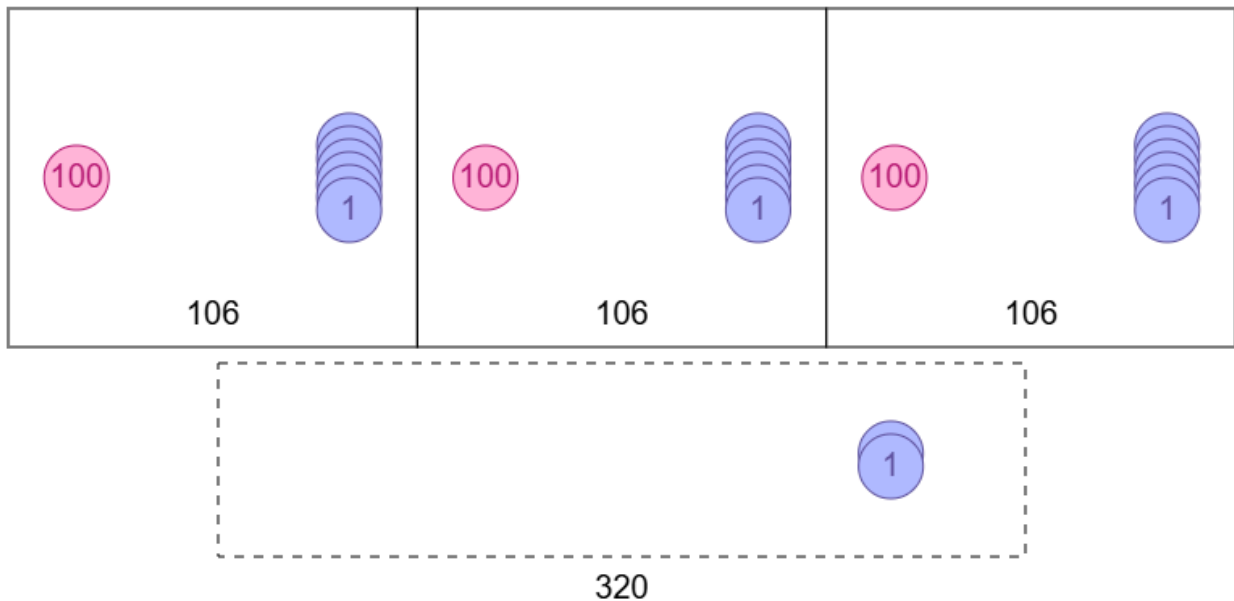
Answer:

Many small pieces can be divided more evenly than fewer larger pieces. I can share 2 sandwiches among 3 friends by cutting the sandwiches into smaller pieces.

Divide 20 ones into 3 groups. How many ones go in each group? Will there be any left over?

Answer: 20 ÷ 3 = ___6___ R ___2___

106   106   106

320

When 20 ones are divided into 3 groups, 6 ones will go in each group. 2 ones will be remaining.

Look at each of the groups above.
What is the value of the disks in each group?

Answer: __1__ hundred + __0__ tens + __6__ ones = ___106___

What is the remainder?

Answer: ___2___

320 ÷ 3 = 106 R 2

PRACTICE

Divide the following. Act out the division steps using the materials provided by your trainer to help you.

Note to the trainer: provide students with place value disks or other physical materials to act out the division steps as shown in the graphics in the learn section.

408 ÷ 4 = __102__

510 ÷ 5 = __102__

102 ÷ 2 = __51__

312 ÷ 6 = __52__

811 ÷ 6 = __135 R 1__

910 ÷ 5 = __182__