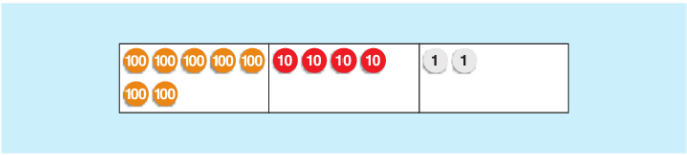
Dimensions Math
Grade 3 Letter Home
Chapter 6 Division

Home Connection

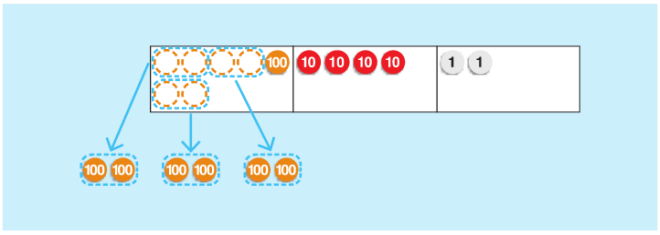
This chapter introduces the standard long division algorithm. The division algorithm is a complex process. It requires an understanding of all four operations, as well as place value and regrouping. Additionally, the standard addition, subtraction, and multiplication algorithms look different in the division algorithm. Students will use place-value discs to enrich their conceptual understanding of the algorithm. The procedure for the division algorithm with place-value discs is given here:

$$742 \div 3$$



	H	T	O
3)	7	4	2

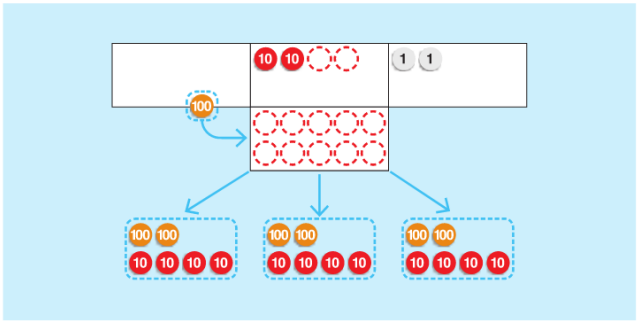
Divide 7 hundreds by 3:



- 7 hundreds divided into 3 equal groups is 2 hundreds in each group with 1 hundred remaining. Write the digit 2 in the hundreds column above the line.
- Of the 7 hundreds, 6 were divided equally into groups. 7 hundreds – 6 hundreds = 1 hundred, which remains to be divided.
- Regroup the remaining 1 hundred as 10 tens. There are now 14 tens.

	H	T	O
	2		
3)	7	4	2
	6		
	1		

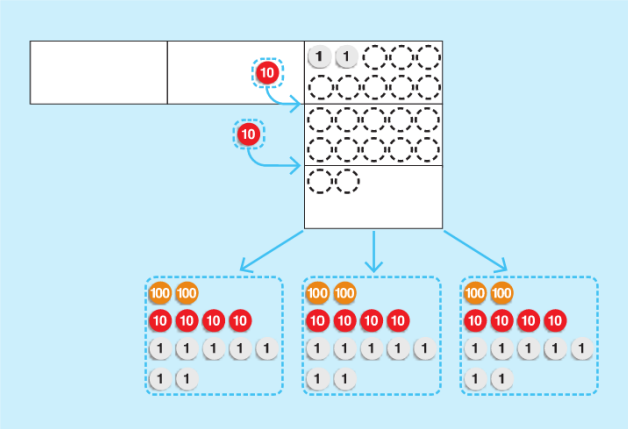
Divide 14 tens by 3:



- 14 tens divided into 3 equal groups is 4 tens in each group with 2 tens remaining. Write the digit 4 in the tens column above the line.
- Of the 14 tens, 12 were divided equally into groups. 14 tens – 12 tens = 2 tens, which remain to be divided.
- Regroup the remaining 2 tens as 20 ones. There are now 22 ones.

	H	T	O
	2	4	
3)	7	4	2
	6		
	1	4	
	1	2	
		2	

Divide 22 ones by 3:



- 22 ones divided into 3 equal groups is 7 ones in each group with 1 one remaining. Write the digit 7 in the ones column above the line.
- Of the 22 ones, 21 were divided equally into groups. 22 ones – 21 ones = 1, so there is a remainder of 1.

	H	T	O
	2	4	7
3)	7	4	2
	6		
	1	4	
	1	2	
		2	2
		2	1
			1

In 742 ÷ 3 = 247 × 3 + 1, the quotient is 247 and the remainder is 1. This can be written as 247 R 1.

What can we do at home?

Practice division at home with this fun hands-on activity.

Leftovers

Division Facts

Materials: Die or a regular deck of playing cards with face cards removed
45 Counters (can use buttons, cereal, Legos, etc.)

Directions:

- Play with two players.
- The object of the game is to have the most counters when the game is over.
- Player One rolls the die or draws a card and divides the 45 counters by the number on the die or card. For example, Player One rolls a 2. She divides the counters into 2 equal groups with 1 left over. That player keeps the leftover counter and play continues with the remaining 44 counters.
- Player Two rolls a 3 and divides the remaining 44 counters by 3. She has 3 groups of 13, with 5 counters left over. Player Two keeps the 5 counters and returns the 39 remaining counters.
- Play continues until no more divisions can be made.
- The player with the most counters is the winner.

Check out a video for Leftovers and other activities to continue to practice multiplication and division fact fluency on our TCA Website.
https://www.tcatitans.org/Domain/200 They are located in the math resources multiplication and division folder.