

Topic E

# Division of Tens and Ones with Successive Remainders Examples

4.NBT.6, 4.OA.3

**Focus Standard:** 4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

**Strategy:** Draw a picture

**Problem:** 7 divided by 2

A remainder of 1 flower:



7 flowers  $\div$  2  
 There are 3 flowers in each vase.  
 There is 1 flower remaining.

**Strategy:** Use place value discs

**Problem:** 70 divided by 2

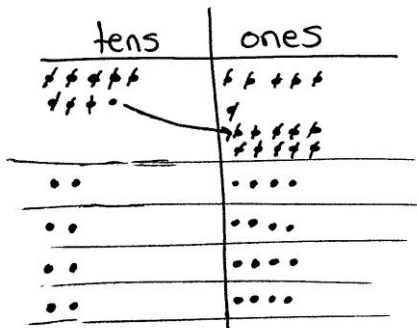
A remainder of 1 ten.



7 tens  $\div$  2  
 There are 3 tens in each group.  
 There is 1 ten remaining.

**Strategy:** Use a place value chart

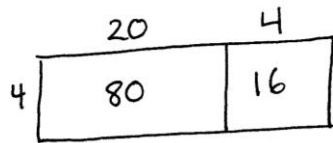
**Problem:** 96 divided by 4



$$\begin{array}{r} 24 \\ 4 \overline{) 96} \\ \underline{- 8} \phantom{0} \\ 16 \\ \underline{- 16} \\ 0 \end{array}$$

**Strategy:** Use area model

**Problem:** 96 divided by 4



$$\begin{array}{c} 96 \\ \swarrow \quad \searrow \\ 80 \quad 16 \\ (80 \div 4) + (16 \div 4) \\ = 20 + 4 \\ = 24 \end{array}$$

# Partial Quotient Division

	Quotient	
Divisor	Dividend	
Dividend $\div$ Divisor = Quotient		

4	746	
	-400	100
	346	
	-320	80
	26	
	- 24	6
	2	

## Steps

1. Think: What can I multiply the divisor by to get close to the dividend without going over?(use multiples of 10 and 100)
2. Repeat till you can't subtract anymore.
3. Add up all the partial quotients.
4. Double check your work with multiplication

If you have any left over that is called a remainder

$746 \div 4 = 186 \text{ R}2$
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# Division Area Model

$$295 \div 5$$

$$50 + 5 + 4 =$$

$$59$$

5	295	45	20
	-250	-25	-20
	45	20	0

$$5,211 \div 3$$

$$1,000 + 700 + 30 + 7 =$$

$$1,737$$

3	5,211	2,211	711	21
	-3,000	-2,100	-90	-21
	2,211	111	21	0