

Lesson 5-1

Mental Math: Find Quotients

Objective:

We will use mental-math and place value strategies to divide multiples of 10 and 100 by 1-digit divisors.

Standard:

NC.4.NBT.6 Find whole-number quotients and remainders with up to three-digit dividends and one-digit divisors with place value understanding using rectangular arrays, area models, repeated subtraction, partial quotients, properties of operations, and/or the relationship between multiplication and division.

I Can Statement:

- I can make sense of quantities and use mental math and place-value strategies to divide.

Essential Question:

- How can you divide mentally?

Remember, we learned many different mental math strategies and patterns for multiplication. Today, we'll learn to use similar strategies to divide numbers that end in one or more zero.

VOCABULARY

dividend	the number to be divided up into smaller groups the dividend .	EX: 10 ÷ 5 = 2; 10 is
divisor	tells how many groups to make from the dividend the divisor .	EX: 10 ÷ 5 = 2; 5 is
quotient	the answer to a division problem.	X: 10 ÷ 5 = 2; 2 is the quotient .
division	an operation that tells how many equal groups there are or how many are in each group.	

Let's look back at what we learned about basic facts and patterns to help us quickly multiply. For example:

$$4 \times 5 = 20$$

$$40 \times 5 = 200$$


$$400 \times 50 = 20,000$$

Remember: We boxed the zeros and multiplied the basic fact of 4×5 ; then added the zeros to the product.

We can use the same mental strategies for division!!

$$14 \div 7 = 2$$

$$140 \div 7 = 20$$

$$14\boxed{00} \div 7 = 200$$


Remember: We boxed the zeros and multiplied the basic fact of 4×5 ; then added the zeros to the product.

When solving $3,200 \div 4$, what basic fact can you use to solve?

THINKING



Think: Basic Division Fact

$$32 \div 4 = 8.$$

$$\text{So, } 3200 \div 4 = ?$$



800

$$54 \div 9 =$$

$$540 \div 9 =$$

$$5,400 \div 9 =$$

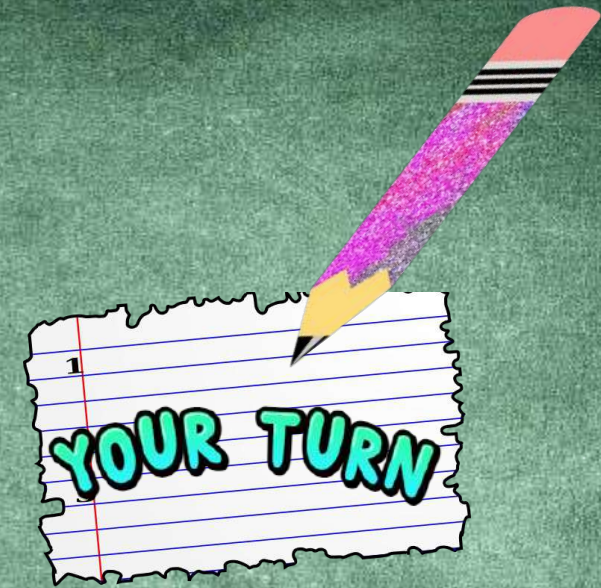
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YOUR TURN



$$54 \div 9 = 6$$

$$540 \div 9 = 60$$

$$5,400 \div 9 = 600$$



$$48 \div 6 =$$

$$480 \div 6 =$$

$$4,800 \div 6 =$$

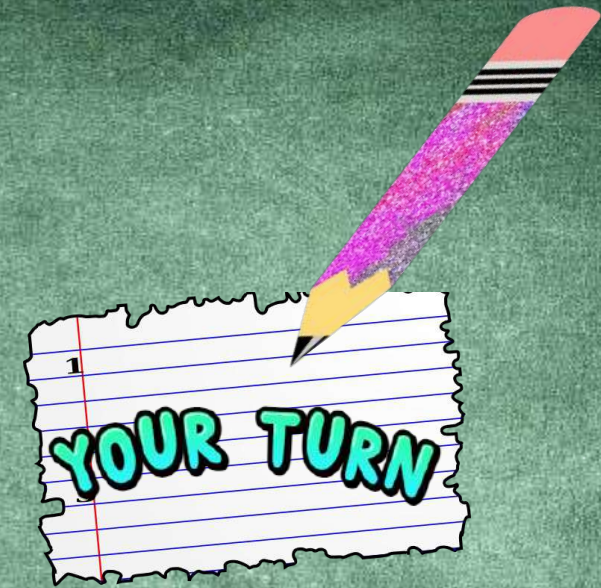
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YOUR TURN



$$48 \div 6 = 8$$

$$480 \div 6 = 80$$

$$4,800 \div 6 = 800$$



Xavier has 900 pencils that he plans to split up equally on 9 bags. How many pencils will each bag have?



$$900 \div 9 = 100 \text{ pencils in each bag}$$



2,400 scholars from Halifax County went to the Panther's game. They were seated evenly on 6 sections of bleachers. How many scholars were on each section of bleachers?



$$2,400 \div 6 = 400 \text{ scholars per section}$$



Sha'Leah made \$120 for drawing pictures for 3 local art galleries. How much money did she make from each gallery?



$$\text{\$120} \div 3 = \text{\$40 from each gallery}$$



INDEPENDENT PRACTICE



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