G5-M2-Lesson 24

1. Divide.

a. $3.5 \div 7 = 0.5$

I can use the basic fact of $35 \div 7 = 5$ to help me solve this problem. 3.5 is 35 tenths. 35 tenths $\div$ 7 = 5 tenths, or 0.5.

Dividing by 70 is the same as dividing by 10 and then dividing by 7.

b. $3.5 \div 70 = 3.5 \div 10 \div 7$
$= 0.35 \div 7$
$= 0.05$

35 tenths $\div$ 10 = 35 hundredths, or 0.35.

35 hundredths $\div$ 7 = 5 hundredths, or 0.05.

c. $4.84 \div 2 = 2.42$

4.84 = 4 ones + 8 tenths + 4 hundredths.
4 ones $\div$ 2 = 2 ones, or 2.
8 tenths $\div$ 2 = 4 tenths, or 0.4.
4 hundredths $\div$ 2 = 2 hundredths, or 0.02.
The answer is 2 + 0.4 + 0.02 = 2.42.

Dividing by 200 is equal to dividing by 100 and then dividing by 2.
Or I can think of it as dividing by 2 and then dividing by 100.

d. $48.4 \div 200 = 48.4 \div 2 \div 100$
$= 24.2 \div 100$
$= 0.242$

48 $\div$ 2 = 24
4 tenths $\div$ 2 = 2 tenths or 0.2.
So, 48.4 $\div$ 2 = 24.2.

I can visualize a place value chart. When I divide by 100, each digit shifts 2 places to the right.

2. Use place value reasoning and the first quotient to compute the second quotient. Use place value to explain how you placed the decimal point.

a. $15.6 \div 60 = 0.26$

The dividend, 15.6, is the same in both number sentences.

I look at the divisors in both number sentences. They are 60 and 6, respectively. 60 is 10 times as large as 6.

$15.6 \div 6 = 2.6$

I know the quotient in this problem must be 10 times as large as 0.26, from the problem above. The answer is 26 hundredths $\times$ 10 = 26 tenths, or 2.6.

There are 10 times fewer groups, so there has to be 10 times more in each group.

b. $0.72 \div 4 = 0.18$

The dividend, 0.72, is the same in both number sentences.

I look at the divisors in both number sentences. They are 4 and 40, respectively. 4 is 10 times smaller than 40.

$0.72 \div 40 = 0.018$

I know the quotient in this problem must be 10 times smaller than 0.18, from the problem above. The answer is 18 hundredths $\div$ 10 = 18 thousandths, or 0.018.

Instead of 4 groups, there are 40 groups. That's 10 times more groups, so there must be 10 times less in each group.