3.7 Dividing a Decimal Less than 1 by a Whole Number

Connect:

Use place value to divide 0.074 by 8.

Estimate first 0.074 is close to 0.072

$$0.009$$
$$8\overline{)0.072}$$

* write zero in the dividend until there is no remainder

O	.	t	h	th	Tth	Hth
0	.	0	0	9	2	5

$$
\begin{array}{r}
0.00925 \\
8\,\overline{)0.074\,0\,0} \\
-\,7\,2 \\
\hline
2\,0 \\
-\,1\,6 \\
\hline
4\,0 \\
-\,4\,0 \\
\hline
0
\end{array}
$$

So, $0.074 \div 8 = 0.00925$.

You can round this to 0.009

Based on the pattern seen in the warm-up, what would $0.0074 \div 8$ be?

Homework: p. 114 # 1-6

Review 1.5-1.7 p. 118 # 9-15

3.7 Dividing a Decimal Less than 1 by a Whole Number

Warm up:

Use a calculator to find each quotient:

1 ÷ 4= 0.25	25 ÷5= 5	168 ÷ 8 = 21
0.1 ÷ 4= 0.025	2.5 ÷ 5= 0.5	16.8 ÷ 8 = 2.1
0.01 ÷4= 0.0025	0.25 ÷ 5= 0.05	1.68÷ 8= 0.21
0.001 ÷4 ''''= 0.00025	0.025 ÷ 5= 0.005	0.186 ÷ 8= 0.021

What pattern do you see?

The smaller the dividend is, with the divisor the same, the smaller the quotient.

$$\text{divisor} \overline{\left.\right)\text{dividend}}^{\text{quotient}}$$

For each place-value the decimal is moved to the left in the dividend, the quotient decimal will move to the left the same amount.