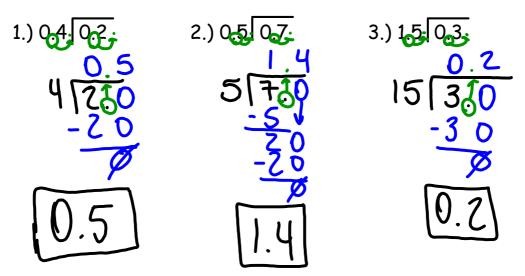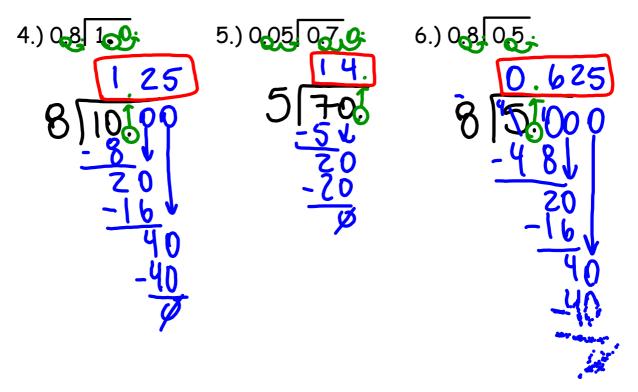### 3.7 Zeros in Division

If needed, write one or more zeros in the quotient to show the correct place value.
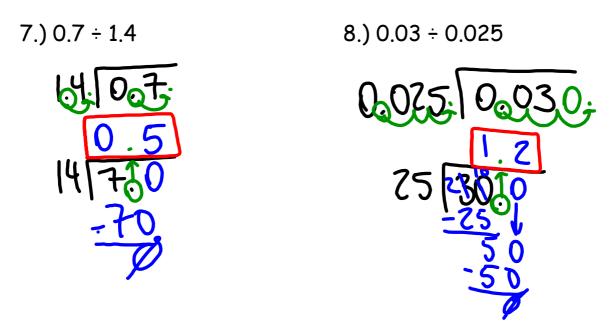
<u>Example</u>: Divide. Write zeros as placeholders in the dividend as needed.

1.) $0.4 \overline{)0.2}$

$$
\begin{array}{r}
0.5 \\
4\overline{)2.0} \\
-2\ 0 \\
\hline
0
\end{array}
$$

0.5

2.) $0.5 \overline{)0.7}$

$$
\begin{array}{r}
1.4 \\
5\overline{)7.0} \\
-5 \\
\hline
2\ 0 \\
-2\ 0 \\
\hline
0
\end{array}
$$

1.4

3.) $1.5 \overline{)0.3}$

$$
\begin{array}{r}
0.2 \\
15\overline{)3.0} \\
-3\ 0 \\
\hline
0
\end{array}
$$

0.2

<u>Example</u>: Divide. Write zeros as placeholders in the dividend as needed.

4.) $0.8 \overline{)1.0}$

$$
\begin{array}{r}
1.25 \\
8\overline{)10.00} \\
-8 \\
\hline
20 \\
-16 \\
\hline
40 \\
-40 \\
\hline
0
\end{array}
$$

5.) $0.05 \overline{)0.7}$

$$
\begin{array}{r}
14. \\
5\overline{)70.} \\
-5 \\
\hline
20 \\
-20 \\
\hline
0
\end{array}
$$

6.) $0.8 \overline{)0.5}$

$$
\begin{array}{r}
0.625 \\
8\overline{)5.000} \\
-48 \\
\hline
20 \\
-16 \\
\hline
40 \\
-40
\end{array}
$$

<u>Example</u>: Divide. Write zeros as placeholders in the dividend as needed.

7.) $0.7 \div 1.4$

$$1.4 \overline{)0.7}$$

$$\boxed{0.5}$$

$$14\overline{)7.0}$$
$$\underline{-70}$$
$$0$$

8.) $0.03 \div 0.025$

$$0.025 \overline{)0.030}$$

$$\boxed{1.2}$$

$$25\overline{)30.0}$$
$$\underline{-25}$$
$$5\,0$$
$$\underline{-5\,0}$$
$$0$$

<u>Example</u>: Divide. Write zeros in the quotient as needed.

9.) $0.405 \div 0.5$

$$0.5 \overline{)0.405}$$

$$\boxed{0.81}$$

$$5\overline{)4.05}$$
$$\underline{-40}$$
$$05$$
$$\underline{-5}$$
$$0$$

10.) $0.702 \div 9$

$$\boxed{0.078}$$

$$9\overline{)0.702}$$
$$\underline{-63}$$
$$72$$
$$\underline{-72}$$
$$0$$

Example: Divide. Round to the nearest thousandth. *3 decimal places*

11.) $0.31 \div 0.07 =$ **4.429**   12.) $0.17 \div 0.9 =$ **0.189**

$$0.07\overline{)0.31}$$

$$7\overline{)31.0000}$$
4.4285
-28
  30
  -28
   20
   -14
    60
    -56
     40
     -35
      5

$$0.9\overline{)0.17}$$

$$9\overline{)17.0000}$$
0.1888
-9
  80
  -72
   80
   -72
    80
    -72
     8

13.) Mr. Arias sells birdhouses for $12.60 each. One month, he makes $189. How many birdhouses did he sell?

$$12.60\overline{)189.00} \Rightarrow 1260\overline{)18900.}$$
15
-1260
  6300
  -6300
    0

15 birdhouses

14.) Montez buys 3.2 pounds of cherries for $2.88 Cody pays $3.78 for 4.5 pounds of cherries. Cody says Montez spends more for each pound of cherries. Is he correct?

$$3.2\overline{)2.88}$$
$$32\overline{)28.8}$$
0.9
$-28 8$
   0

Cody is correct. Montez does spend more.

$$4.5\overline{)3.78}$$
$$45\overline{)37.80}$$
0.84
$-36 0$
   1 80
   $-1 80$
     0

3