

3.7 Zeros in Division

If needed, write one or more zeros in the quotient to show the correct place value.

Example: Divide. Write zeros as placeholders in the dividend as needed.

$$1.) \begin{array}{r} 0.4 \overline{) 0.2} \\ \underline{0.0} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

0.5

$$2.) \begin{array}{r} 0.5 \overline{) 0.7} \\ \underline{0.5} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

1.4

$$3.) \begin{array}{r} 1.5 \overline{) 0.3} \\ \underline{0.0} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

0.2

Example: Divide. Write zeros as placeholders in the dividend as needed.

$$4.) \begin{array}{r} 0.8 \overline{) 1.00} \\ \underline{0.8} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

1.25

$$5.) \begin{array}{r} 0.05 \overline{) 0.7} \\ \underline{0.5} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

1.4

$$6.) \begin{array}{r} 0.8 \overline{) 0.5} \\ \underline{0.4} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

0.625

Example: Divide. Write zeros as placeholders in the dividend as needed.

7.) $0.7 \div 1.4$

$$\begin{array}{r} 1.4 \overline{) 0.7} \\ \underline{0.5} \\ 14 \overline{) 70} \\ \underline{-70} \\ \end{array}$$

8.) $0.03 \div 0.025$

$$\begin{array}{r} 0.025 \overline{) 0.030} \\ \underline{0.025} \\ 25 \overline{) 300} \\ \underline{-250} \\ 50 \\ \underline{-50} \\ \end{array}$$

Example: Divide. Write zeros in the quotient as needed.

9.) $0.405 \div 0.5$

$$\begin{array}{r} 0.5 \overline{) 0.405} \\ \underline{0.40} \\ 5 \overline{) 405} \\ \underline{-40} \\ 5 \\ \underline{-5} \\ \end{array}$$

10.) $0.702 \div 9$

$$\begin{array}{r} 9 \overline{) 0.702} \\ \underline{-63} \\ 72 \\ \underline{-72} \\ \end{array}$$

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

11.) $0.31 \div 0.07 = 4.429$

12.) $0.17 \div 0.9 = 0.189$

Handwritten long division for $0.07 \overline{)0.31}$. The quotient is 4.4285 . The final answer is rounded to 4.429 . The division steps are shown with 310000 on the dividend and 7 on the divisor. Subtractions are shown: 28 , 2810 , 28 , 180 , 140 , 580 , 56 , 40 , 35 , and 5 .

Handwritten long division for $0.9 \overline{)0.17}$. The quotient is 0.1888 . The final answer is rounded to 0.189 . The division steps are shown with 17000 on the dividend and 9 on the divisor. Subtractions are shown: 9 , 780 , 72 , 780 , 72 , 780 , and 72 .

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

Handwritten long division for $1260 \overline{)18900}$. The quotient is 15 . The final answer is boxed as "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?

Handwritten long division for $3.2 \overline{)2.88}$. The quotient is 0.9 . The division steps are shown with 288 on the dividend and 32 on the divisor. Subtractions are shown: 288 and 288 .

Cody is correct. Montez does spend more.

Handwritten long division for $4.5 \overline{)3.78}$. The quotient is 0.84 . The division steps are shown with 3780 on the dividend and 45 on the divisor. Subtractions are shown: 3780 , 3600 , 180 , and 180 .