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| <b>Chapter 2</b>          | <b>Fractions and Decimals</b>  |
| Date:                     | <b>2.6 Dividing Decimals</b>   |
| <b>Essential Question</b> | <b>How can you divide decimals?</b>  |
| <b>Steps</b>              | <b>1. Place the decimal point in the quotient above the decimal point in the dividend.<br/>2. Then divide as you would with whole numbers.</b> |

**Steps**

- 1. Place the decimal point in the quotient above the decimal point in the dividend.**
- 2. Then divide as you would with whole numbers.**

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**Example:**

$$\begin{array}{r} 1.83 \\ 4 \overline{) 7.32} \\ \underline{-4} \phantom{.} \phantom{2} \\ 33 \\ \underline{-32} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

Complete problems 1 and 2 in your composition book.

1)  $7.6 \div 4$

$$\begin{array}{r} 1.9 \\ 4 \overline{) 7.6} \\ \underline{- 4} \phantom{0} \\ 36 \\ \underline{- 36} \\ 0 \end{array}$$

2)  $4.38 \div 12$

$$\begin{array}{r} 0.365 \\ 12 \overline{) 4.380} \\ \underline{- 36} \phantom{0} \\ 78 \\ \underline{- 72} \\ 60 \\ \underline{- 60} \\ 0 \end{array}$$

Complete problems 1 and 2 on your notes page.

1)  $59.64 \div 7$

$$\begin{array}{r} 8.52 \\ 7 \overline{) 59.64} \\ \underline{-56} \phantom{0} \downarrow \\ 36 \phantom{0} \downarrow \\ \underline{-35} \phantom{0} \downarrow \\ 14 \phantom{0} \downarrow \\ \underline{-14} \\ 0 \end{array}$$

2)  $3.12 \div 16$

$$\begin{array}{r} 0.195 \\ 16 \overline{) 3.120} \\ \underline{-16} \phantom{0} \downarrow \\ 152 \phantom{0} \downarrow \\ \underline{-144} \phantom{0} \downarrow \\ 80 \phantom{0} \downarrow \\ \underline{-80} \\ 0 \end{array}$$

**Dividing a Decimal  
by a Decimal**



**The divisor must be a  
whole number.**



**You must move the decimal  
in both the divisor and  
dividend.**

**Example**       $4.56 \div 1.2$

$$1.2 \overline{) 4.56}$$

$$12 \overline{) 45.6}$$

$$\begin{array}{r} 3.8 \\ 12 \overline{) 45.6} \\ \underline{-36} \phantom{0} \\ 96 \\ \underline{-96} \\ 0 \end{array}$$

Complete problems 3 and 4 in your composition book.

3)  $18.2 \div 1.4$

$$1.4 \overline{)18.2}$$

$$\begin{array}{r} 13 \\ 14 \overline{)182} \\ \underline{-14} \downarrow \\ 42 \\ \underline{-42} \\ 0 \end{array}$$

4)  $0.273 \div 0.39$

$$0.39 \overline{)0.273}$$

$$\begin{array}{r} 0.7 \\ 39 \overline{)27.3} \\ \underline{-273} \\ 0 \end{array}$$

Complete problems 3 and 4 on your notes page.

3)  $57.8 \div 3.4$

4)  $21.643 \div 0.23$

$$3.4 \overline{) 57.8}$$

$$\begin{array}{r} 17 \\ 34 \overline{) 578} \\ - 34 \downarrow \\ \hline 238 \\ - 238 \\ \hline 0 \end{array}$$

$$0.23 \overline{) 21.643}$$

$$\begin{array}{r} 94.1 \\ 23 \overline{) 2164.3} \\ - 207 \downarrow \\ \hline 94 \\ - 92 \downarrow \\ \hline 23 \\ - 23 \\ \hline 0 \end{array}$$

Complete problems 5 and 6 in your composition book.

Note: Sometimes you will have to insert a zero in the dividend and/or the quotient.

5)  $3.8 \div 0.16$

$$\begin{array}{r} 0.16 \overline{) 3.8} \\ \hline \end{array}$$

$$\begin{array}{r} 23.75 \\ 16 \overline{) 380.00} \\ \underline{-32} \phantom{00} \phantom{00} \\ 60 \phantom{00} \phantom{00} \\ \underline{-48} \phantom{00} \phantom{00} \\ 120 \phantom{00} \\ \underline{-112} \phantom{00} \\ 80 \\ \underline{-80} \\ 0 \end{array}$$

6)  $2.45 \div 0.007$

$$\begin{array}{r} 0.007 \overline{) 2.45} \\ \hline \end{array}$$

$$\begin{array}{r} 350 \\ 7 \overline{) 2450} \\ \underline{-21} \phantom{00} \phantom{00} \\ 35 \phantom{00} \\ \underline{-35} \phantom{00} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$



Complete problems 5 and 6 on your notes page.

5)  $15.6 \div 0.78$

6)  $7.2 \div 0.048$

$$\begin{array}{r} 0.78 \overline{) 15.6} \end{array}$$

$$\begin{array}{r} 0.048 \overline{) 7.2} \end{array}$$

$$\begin{array}{r} 20 \\ 78 \overline{) 1560} \\ \underline{-156} \downarrow \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

$$\begin{array}{r} 150 \\ 48 \overline{) 7200} \\ \underline{-48} \downarrow \\ 240 \\ \underline{-240} \downarrow \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

Complete problem 7 in your composition book.

7) How many times more cellular phone subscribers were there in 2011 than in 1991?

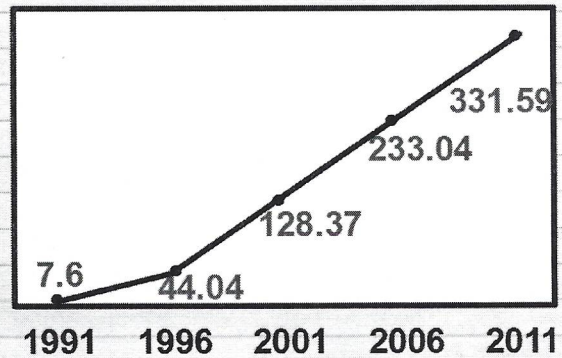
*Round to the nearest whole number.*

$$? \times 7.6 = 331.59$$

$$331.59 \div 7.6 = ?$$

$$7.6 \overline{) 331.59}$$

$$\begin{array}{r} 43.6 \\ 76 \overline{) 3315.9} \\ \underline{-304} \phantom{.} \\ 275 \phantom{.} \\ \underline{-228} \phantom{.} \\ 479 \phantom{.} \\ \underline{-456} \\ 23 \end{array}$$



There were about 44 times more subscribers in 2011 than in 1991.