

Unit 13

Divide Decimals

Standard

Number & Operations in Base Ten

Perform operations with multi-digit whole numbers and with decimals to hundredths.

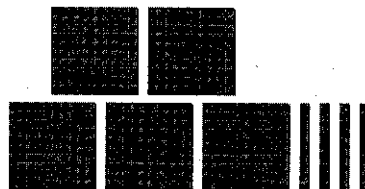
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Model the Skill

◆ **Say:** *Today we are going to divide decimals using base-ten blocks.* Hold up a hundreds flat and explain that it will represent one whole. **Ask:** *What is a base-ten block? (one-tenth) What is a ones cube? (one-hundredth)*

◆ Write the following problem on the board.

$$5.4 \div 2 =$$



◆ **Ask:** *How can you divide 5.4 into two groups? (Possible answer: Put two wholes into each group; regroup 1 whole as 10 tenths and divide the 14 tenths into two groups of 7 tenths.) What is 5.4 divided by 2? (2.7)*

◆ Direct students to another problem. **Ask:** *How can you divide 2.5 into 5 groups? (Possible answer: Regroup each whole as 10 tenths so that there are 25 tenths. Then divide the 25 tenths into 5 groups with 5 each.) What is 2.5 divided by 5? (0.5)*

◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$7.2 \div 2$$

$$0.35 \div 0.7$$

$$0.3 \div 0.6$$

$$1.85 \div 0.05$$

$$1.8 \div 3$$

$$7.5 \div 1.5$$

$$9.6 \div 1.2$$

$$2.06 \div 1.24$$

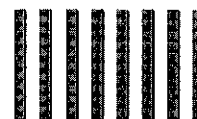
Find each quotient. Use models to help.

① $0.8 \div 2 =$ _____

$$2 \overline{)0.8}$$

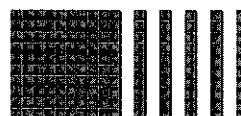
Place the decimal point in the quotient directly above the decimal point in the dividend.

$$0. \overline{)0.8}$$



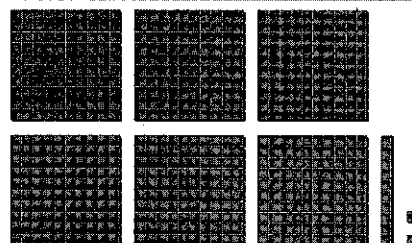
② $1.5 \div 5 =$ _____

$$5 \overline{)1.5}$$



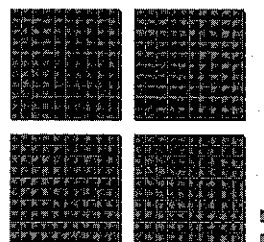
③ $6.12 \div 4 =$ _____

$$4 \overline{)6.12}$$



④ $4.02 \div 0.3 =$ _____

$$0.3 \overline{)4.02}$$

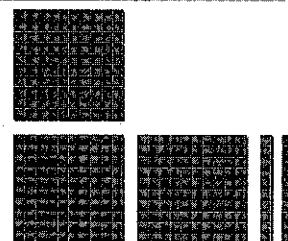


⑤ $3.2 \div 0.4 =$ _____

$$0.4 \overline{)3.2}$$

Think:
 $4 \overline{)32}$

Change the divisor to a whole number by multiplying the divisor by a power of 10. Then multiply the dividend by the same power of 10.



⑥ $0.264 \div 0.06 =$ _____

$$0.06 \overline{)0.264}$$



Circle the quotient that shows hundredths.

Find each quotient. Divide as you would with whole numbers.

1 $8.06 \div 0.2 = \underline{\hspace{2cm}}$

$0.2 \overline{)8.06}$ <p>◀ Multiply the divisor and the dividend by 10.</p>	$4 \overline{)80.6}$ <p>◀ Place the decimal point in the quotient. ◀ Divide. ◀ Multiply. ◀ Subtract.</p> <p>Think: $2 \overline{)8}$</p>	$4.0 \overline{)8.06}$ <p>◀ Bring down. Divide.</p> <p>$- 8 \downarrow$ $00 \downarrow$ 6</p> <p>Think: $2 \overline{)0} = 0$ and $0 \times 2 = 0$. Write 0 in the quotient.</p> <p>Divide.</p>
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2 $4.05 \div 5 = \underline{\hspace{2cm}}$

$5 \overline{)4.05}$

3 $7.2 \div 0.9 = \underline{\hspace{2cm}}$

$0.9 \overline{)7.2}$

4 $8.32 \div 0.8 = \underline{\hspace{2cm}}$

$0.8 \overline{)8.32}$

5 $10.2 \div 0.2 = \underline{\hspace{2cm}}$

$0.2 \overline{)10.2}$

6 $5.2 \div 5 = \underline{\hspace{2cm}}$

$5 \overline{)5.2}$

7 $6.3 \div 0.3 = \underline{\hspace{2cm}}$

$0.3 \overline{)6.3}$

8 $2.07 \div 3 = \underline{\hspace{2cm}}$

$3 \overline{)2.07}$

9 $7.8 \div 0.4 = \underline{\hspace{2cm}}$

$0.4 \overline{)7.8}$

10 $2.34 \div 0.03 = \underline{\hspace{2cm}}$

$0.03 \overline{)2.34}$

11 $7.3 \div 0.2 = \underline{\hspace{2cm}}$

$0.2 \overline{)7.3}$

12 $0.9 \div 3 = \underline{\hspace{2cm}}$

$3 \overline{)0.9}$

13 $2.7 \div 0.09 = \underline{\hspace{2cm}}$

$0.09 \overline{)2.7}$

14 $10.50 \div 0.5 = \underline{\hspace{2cm}}$

$0.5 \overline{)10.50}$

15 $1.48 \div 0.3 = \underline{\hspace{2cm}}$

$0.3 \overline{)1.48}$

16 $0.02 \div 2 = \underline{\hspace{2cm}}$

$2 \overline{)0.02}$



Tell how you can use multiplication to check your answer.

Find each quotient. Divide as you would with whole numbers.

①

$1.8 \div 5 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 5 \overline{) 1.8} \\ \hline \end{array}$$

②

$36 \div 1.2 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 1.2 \overline{) 36} \\ \hline \end{array}$$

③

$4.9 \div 0.7 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 0.7 \overline{) 4.9} \\ \hline \end{array}$$

④

$5.42 \div 0.8 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 0.8 \overline{) 5.42} \\ \hline \end{array}$$

⑤

$2.5 \div 50 = \underline{\hspace{2cm}}$

⑥

$17.2 \div 0.2 = \underline{\hspace{2cm}}$

⑦

$21.7 \div 3.5 = \underline{\hspace{2cm}}$

⑧

$17.5 \div 0.25 = \underline{\hspace{2cm}}$

⑨

$98 \div 25 = \underline{\hspace{2cm}}$

⑩

$36.75 \div 3 = \underline{\hspace{2cm}}$

⑪

$4.05 \div 0.5 = \underline{\hspace{2cm}}$

⑫

$23.31 \div 6.3 = \underline{\hspace{2cm}}$

⑬

$1.17 \div 0.2 = \underline{\hspace{2cm}}$

⑭

$4.5 \div 1.8 = \underline{\hspace{2cm}}$

⑮

$5.8 \div 4 = \underline{\hspace{2cm}}$

⑯

$3.2 \div 16 = \underline{\hspace{2cm}}$

⑰

$371 \div 10.6 = \underline{\hspace{2cm}}$

⑱

$74.2 \div 4 = \underline{\hspace{2cm}}$

⑲

$3.3 \div 0.08 = \underline{\hspace{2cm}}$

⑳

$59.25 \div 0.75 = \underline{\hspace{2cm}}$

㉑

$4.5 \div 3 = \underline{\hspace{2cm}}$

㉒

$41.6 \div 6.5 = \underline{\hspace{2cm}}$

㉓

$101.1 \div 0.2 = \underline{\hspace{2cm}}$

㉔

$9.9 \div 1.5 = \underline{\hspace{2cm}}$



Tell how you know your answer is correct.

Find each quotient.

- 1 What is the quotient of 6.16 divided by 1.1?
 - 2 What is the quotient of 12.75 divided by 3?
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- 3 Heidi bought a set of eight plates at the antique store. She paid \$77.20. How much did each plate cost?
 - 4 Caleb spent \$34.95 on 5 pounds of coffee. How much was the coffee per pound?
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- 5 Michael returned a bag of cans and received \$4.65 back. If the deposit for each can was \$0.05, how many cans did he return?
 - 6 Olivia bought 3 containers of orange juice. She bought a total of 90.6 ounces of juice. How many ounces are in each container?

Circle the letter for the correct answer.

- 7 Frederick paid \$45.96 for 4 beach towels. How much did each beach towel cost?
a) \$11.29
b) \$11.39
c) \$11.49
d) \$9.99
- 8 Maggie paid \$47.25 for 3.5 kilograms of shrimp. What is the price of shrimp per kilogram?
a) \$13.50
b) \$13.00
c) \$12.50
d) \$13.75