

## Chapter

## 8

## Decimals

## Practice 1 Understanding Thousandths

Write the decimal shown in each place-value chart.

Example

Ones	Tenths	Hundredths	Thousandths
	○ ○	○ ○ ○	○ ○ ○ ○ ○ ○ ○

0.237

1.

Ones	Tenths	Hundredths	Thousandths
○ ○ ○ ○		○ ○ ○ ○ ○	○ ○ ○ ○ ○

\_\_\_\_\_

2.

Ones	Tenths	Hundredths	Thousandths
○ ○ ○ ○ ○ ○			○ ○ ○ ○ ○ ○ ○ ○ ○

\_\_\_\_\_

**Write the decimal shown in the place-value chart.**

**3.**

Ones	Tenths	Hundredths	Thousandths
			

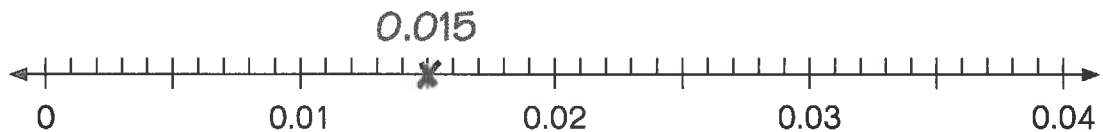
\_\_\_\_\_

**Mark X to show where each decimal is located.**

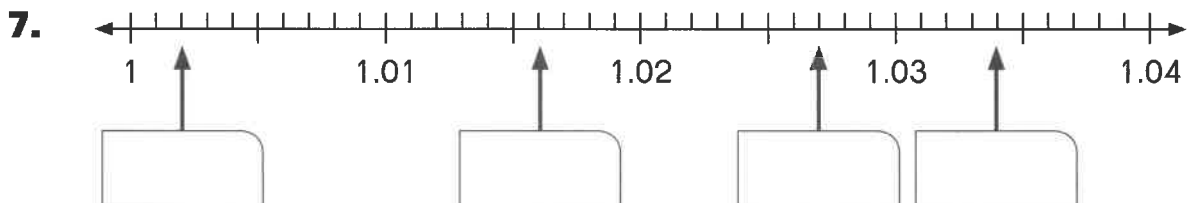
**4.** 0.006

**5.** 0.024

**6.** 0.033



**Write the decimal shown by each arrow.**



**Complete.**

**8.** 4 hundredths = \_\_\_\_\_ thousandths

**9.** 8 tenths 5 hundredths = \_\_\_\_\_ thousandths

**10.** 20 thousandths = \_\_\_\_\_ hundredths

**11.** 125 thousandths = 1 tenth \_\_\_\_\_ thousandths

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Complete.**

12.  $0.126 = 1 \text{ tenth } 2 \text{ hundredths } \underline{\hspace{2cm}} \text{ thousandths}$

13.  $0.352 = 3 \text{ tenths } \underline{\hspace{2cm}} \text{ hundredths } 2 \text{ thousandths}$

**Write the equivalent decimal.**

14.  $7 \text{ thousandths} = \underline{\hspace{2cm}}$

15.  $19 \text{ thousandths} = \underline{\hspace{2cm}}$

16.  $235 \text{ thousandths} = \underline{\hspace{2cm}}$

17.  $300 \text{ thousandths} = \underline{\hspace{2cm}}$

**Write each fraction as a decimal.**

18.  $\frac{13}{1000} = \underline{\hspace{2cm}}$

19.  $\frac{55}{1000} = \underline{\hspace{2cm}}$

20.  $\frac{228}{1000} = \underline{\hspace{2cm}}$

21.  $\frac{430}{1000} = \underline{\hspace{2cm}}$

**Write each mixed number as a decimal.**

22.  $2\frac{3}{1000} = \underline{\hspace{2cm}}$

23.  $6\frac{61}{1000} = \underline{\hspace{2cm}}$

24.  $7\frac{107}{1000} = \underline{\hspace{2cm}}$

25.  $8\frac{240}{1000} = \underline{\hspace{2cm}}$

**Write each improper fraction as a decimal.**

26.  $\frac{1005}{1000} = \underline{\hspace{2cm}}$

27.  $\frac{1013}{1000} = \underline{\hspace{2cm}}$

28.  $\frac{2341}{1000} = \underline{\hspace{2cm}}$

29.  $\frac{3450}{1000} = \underline{\hspace{2cm}}$

**Complete.**

30.  $0.014 =$  \_\_\_\_\_ thousandths

31.  $0.178 =$  \_\_\_\_\_ thousandths

32.  $0.76 =$  \_\_\_\_\_ thousandths

33.  $1.035 = 1$  one and \_\_\_\_\_ thousandths

**1.234 can be written in expanded form as  $1 + \frac{2}{10} + \frac{3}{100} + \frac{4}{1000}$ .**  
**Write each decimal in expanded notation.**

34.  $4.153 =$   +  +  +

35.  $8.381 =$   +  +  +

**9.876 can be written in expanded form as  $9 + 0.8 + 0.07 + 0.006$ .**  
**Write each decimal in expanded notation.**

36.  $6.426 =$  \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_

37.  $3.642 =$  \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_

**Complete.**

In 5.074,

38. the digit 4 is in the \_\_\_\_\_ place.

39. the value of the digit 7 is \_\_\_\_\_.

40. the digit 0 is in the \_\_\_\_\_ place.

41. the digit 5 stands for \_\_\_\_\_.

## Practice 2 Comparing and Rounding Decimals

Compare the decimals in each place-value chart.

Fill in the blanks. Write  $>$  or  $<$  in the  $\bigcirc$ .

Example

Ones	Tenths	Hundredths	Thousandths
0	0	2	
0	0	1	5

0.02 is greater than 0.015.

0.02  $\bigcirc$  0.015

1.

Ones	Tenths	Hundredths	Thousandths
0	3	0	8
0	2	9	

\_\_\_\_\_ is less than \_\_\_\_\_.

\_\_\_\_\_  $\bigcirc$  \_\_\_\_\_

2.

Ones	Tenths	Hundredths	Thousandths
4	0	9	1
4	1	9	

\_\_\_\_\_ is less than \_\_\_\_\_.

\_\_\_\_\_  $\bigcirc$  \_\_\_\_\_

**Write the greater decimal.**

3. 11.6 or 21.8 \_\_\_\_\_
4. 10.55 or 10.05 \_\_\_\_\_
5. 20.07 or 20.01 \_\_\_\_\_
6. 100.202 or 100.212 \_\_\_\_\_

**Write >, <, or = in each  $\bigcirc$ .**

7. 3.7  $\bigcirc$  0.370
8. 0.150  $\bigcirc$  0.51
9. 0.205  $\bigcirc$  2.05
10. 2.3  $\bigcirc$  2.30

**Circle the greatest decimal and underline the least.**

11. 1.03, 1.3, 0.13
12. 0.5, 0.53, 0.503
13. 2.35, 2.305, 2.035
14. 8.7, 8.07, 8.701

**Order the decimals from least to greatest.**

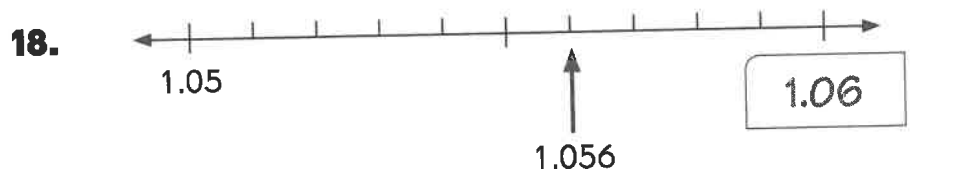
*Example*

3.33, 3.03, 3.303

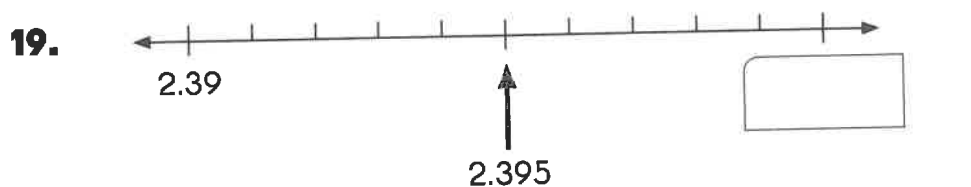
3.03, 3.303, 3.33

15. 5.51, 5.051, 5.501 \_\_\_\_\_
16. 4, 4.01, 4.001 \_\_\_\_\_
17. 0.023, 0.203, 0.230 \_\_\_\_\_

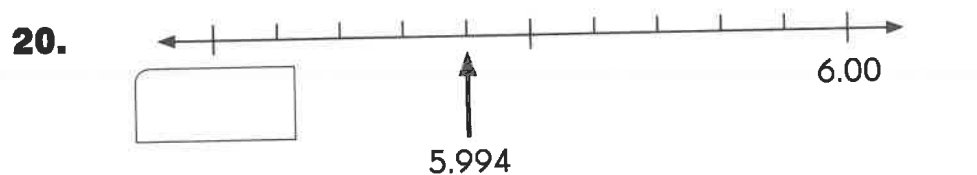
**Write the missing decimal in each box. Round the given decimal to the nearest hundredth.**



1.056 rounded to the nearest hundredth is \_\_\_\_\_.



2.395 rounded to the nearest hundredth is \_\_\_\_\_.



5.994 rounded to the nearest hundredth is \_\_\_\_\_.

**Fill in the blanks.**

21. The mass of a sewing needle is 0.585 gram.  
Round the mass to the nearest hundredth of a gram.

0.585 g rounds to \_\_\_\_\_.

22. The width of a pinhead is 0.098 centimeter.  
Round the width to two decimal places.

\_\_\_\_\_ rounds to \_\_\_\_\_.

23. 1 centimeter is equal to 0.394 inches.  
Round 0.394 inches to the nearest hundredth of an inch.

\_\_\_\_\_ rounds to \_\_\_\_\_.

**Round each decimal to the nearest whole number, nearest tenth, and nearest hundredth.**

**24.**

Decimal	Rounded to the Nearest		
	Whole Number	Tenth	Hundredth
1.049			
3.753			
2.199			

**Fill in the blanks.**

- 25.** A decimal rounded to the nearest tenth is 2.5.  
Write two decimals that can be rounded to 2.5.

\_\_\_\_\_ and \_\_\_\_\_

- 26.** A decimal rounded to the nearest hundredth is 4.09.  
Write two decimals that can be rounded to 4.09.

\_\_\_\_\_ and \_\_\_\_\_

- 27.** A decimal rounded to the nearest hundredth is 6.32.  
This decimal is greater than 6.32.

What could this decimal be? \_\_\_\_\_

- 28.** A decimal rounded to the nearest hundredth is 7.01.  
This decimal is less than 7.01.

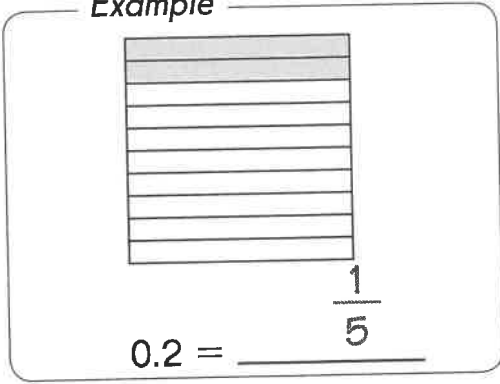
What could this decimal be? \_\_\_\_\_



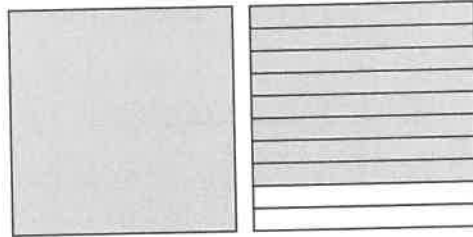
# Practice 3 Rewriting Decimals as Fractions and Mixed Numbers

Rewrite each decimal as a fraction or mixed number in simplest form.

Example

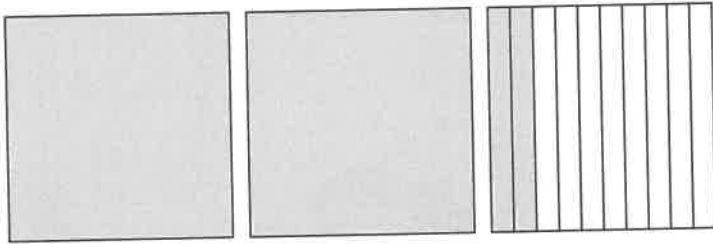


1.



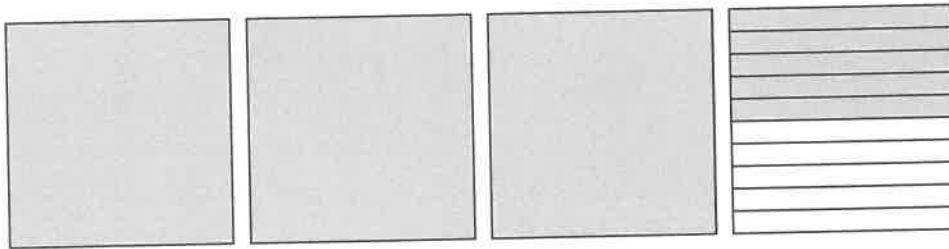
$1.8 = \underline{\hspace{2cm}}$

2.



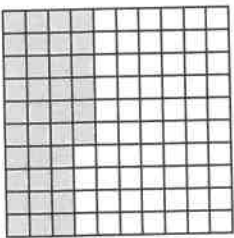
$2.2 = \underline{\hspace{2cm}}$

3.



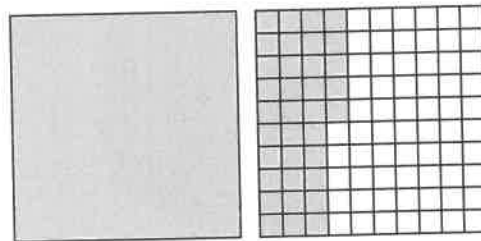
$3.5 = \underline{\hspace{2cm}}$

4.



$0.36 = \underline{\hspace{2cm}}$

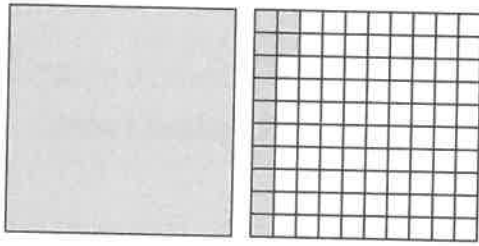
5.



$1.35 = \underline{\hspace{2cm}}$

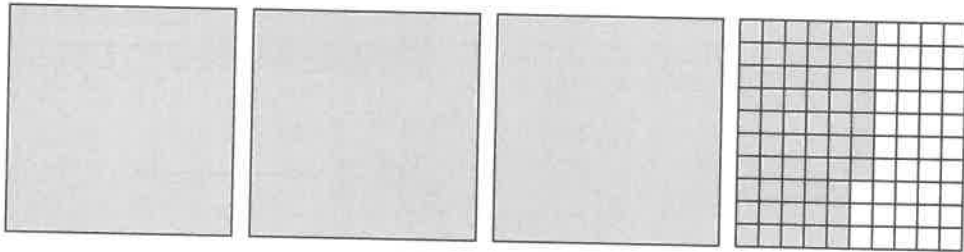
**Rewrite each decimal as a fraction or mixed number in simplest form.**

**6.**



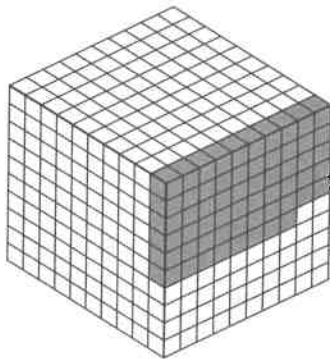
1.12 = \_\_\_\_\_

**7.**



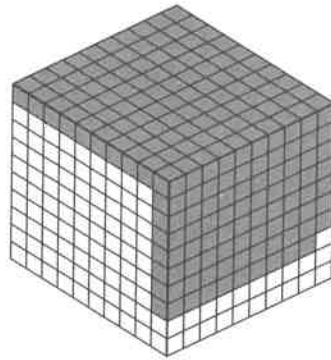
3.57 = \_\_\_\_\_

**8.**



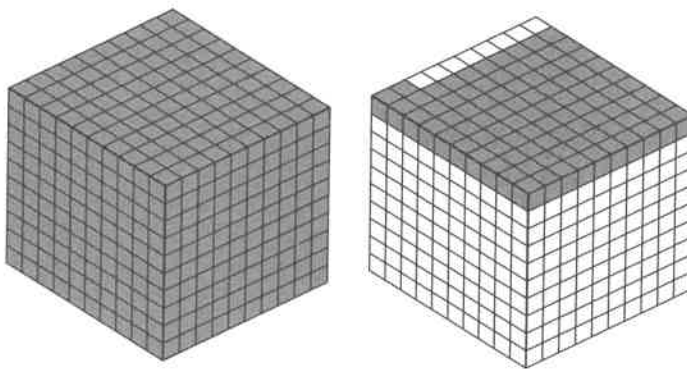
0.058 = \_\_\_\_\_

**9.**



0.169 = \_\_\_\_\_

**10.**



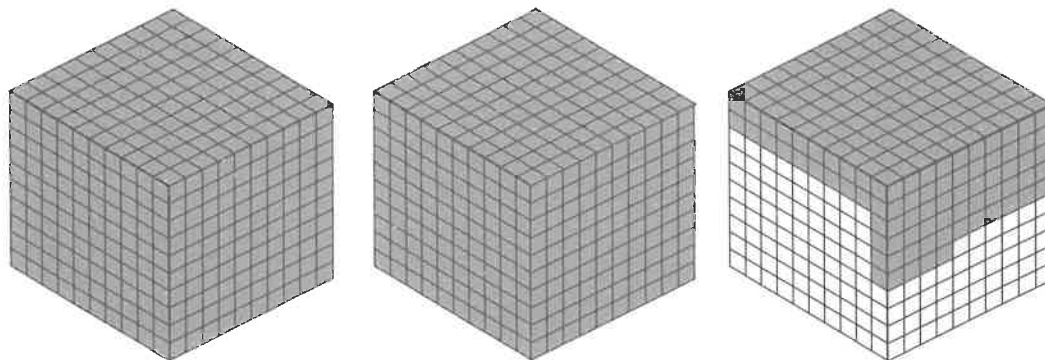
1.092 = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Rewrite the decimal as a mixed number in simplest form.**

**11.**



2.235 = \_\_\_\_\_

**Rewrite each decimal as a fraction or mixed number in simplest form.**

**12.** 7.3

**13.** 26.9

**14.** 0.59

**15.** 15.82

**16.** 1.28

**17.** 4.109

**18.** 0.136

**19.** 3.602

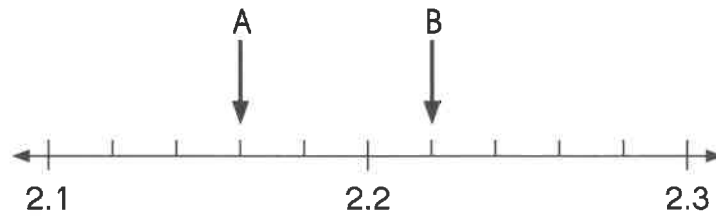
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# Math Journal

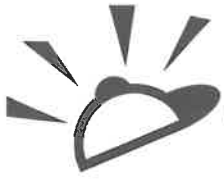
1. Explain why 1.8, 1.80, and 1.800 have the same value.

2. Howard does not know how to find the values of A and B on the number line. Write the steps Howard should use to find these values.



Find the value of each mark on the number line first.





# Put On Your Thinking Cap!



## Challenging Practice

### Solve.

1. You are given two numbers, 3.987 and 70.140.
  - a. Round each number to the nearest tenth.
  - b. Round each number to the nearest hundredth.
  - c. Find the difference between your rounded answers for 3.987.
  - d. Find the difference between your rounded answers for 70.140.
  - e. Are your answers in Exercises **a** and **b** the same? Explain why or why not.

### Complete.

$$2. \quad 4.129 = 4 + \frac{1}{10} + \frac{29}{\boxed{\phantom{000}}}$$

$$3. \quad 2.075 = 2 + \frac{\boxed{\phantom{000}}}{1000} + \frac{5}{\boxed{\phantom{000}}}$$

$$4. \quad 3.157 = \frac{\boxed{\phantom{000}}}{1000} + \frac{7}{1000}$$

