

SKILL 1:

Reading and Writing Decimals

Student pages 1-2

Name _____ Date _____ Class _____



SKILL 1: Reading and Writing Decimals

Each grid is separated into 100 sections of the same size, so each section represents one hundredth. The decimal shown is also written in a place-value chart, in number form, and in word form.

Place-value chart: _____

Number form: 1.29

Word form: one and twenty-nine hundredths

Example 1

Write the decimal shown at the right in number form and in word form.

The grid is divided into 10 sections of the same size, so each section represents one tenth. Five sections are shaded.

Number form: 0.5

Word form: five tenths

Example 2

Write four and three hundred eleven thousandths as a decimal.

The decimal point is read "and." A decimal in thousandths has three digits after the decimal point, so the decimal is 4.311.

Guided Practice

Write the decimal shown in number form and then in word form.

1. 1.25 one and twenty-five hundredths

2. 2.3 two and three tenths

Write each number as a decimal.

3. eight hundredths 0.08 4. eight tenths 0.8
5. three and four hundred ninety-seven thousandths 3.497

Section A: Introduction to Decimals

Decimals 1

Name _____ Date _____ Class _____

SKILL 1: Practice

Write each decimal shown in number form and in word form.

1. 0.3 three tenths one and forty-one hundredths

2. 0.05 five hundredths

3. 1.41 one and forty-one hundredths

Write each number as a decimal.

4. six hundredths 0.06 5. six tenths 0.6
6. six thousandths 0.006 7. fifteen ten-thousandths 0.0015
8. fifty and four tenths 50.4 9. four and six hundredths 4.06
10. one hundred eight and ninety-five hundredths 108.95
11. two thousand four hundred seventy-five and one tenth 2,475.1
12. nine and four thousand one hundred twelve ten-thousandths 9.4112
13. ninety-one and three hundred seven thousandths 91.307
14. nine hundred sixty-eight thousandths 0.968

Find each answer.

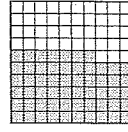
15. How many tenths are in 1 one? 10
16. How many hundredths are in 1 tenth? 10



17. Which decimal is shown below?

Skill 1

- A 5.7 C 0.57 F 0.35 H 3.005
- B 0.057 D 5700 G 3.05 J 3.50



18. Which decimal is read three and five hundredths?

Skill 1

- F 0.35 H 3.005 J 3.50
- G 3.05

Section A: Introduction to Decimals

2 Decimals

SKILL 2: Equivalent Decimals and Writing a Decimal as a Fraction

Student pages 3-4

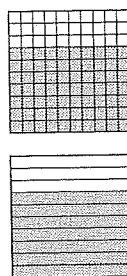
Name _____ Date _____ Class _____

SKILL 2: Equivalent Decimals and Writing a Decimal as a Fraction

Annexing, or writing, zeros to the right of the last nonzero digit in a decimal does not change the value of the decimal number.

Example 1

The same decimal is shown by each grid.



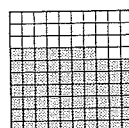
0.7 and 0.70 are equivalent decimals.

$$0.7 = 0.70$$

Example 2

The grid at the right shows 67 hundredths. You can write this number as a decimal or as a fraction. Remember, a denominator of 100 shows hundredths.

$$0.67 = \frac{67}{100}$$



Guided Practice

Write each decimal as an equivalent decimal in hundredths.

$$1. 0.6 = 0.60 \quad 2. 5.9 = 5.90 \quad 3. 12.8 = 12.80 \quad 4. 0.200 = 0.20$$

Write each decimal as an equivalent decimal in thousandths.

$$5. 0.37 = 0.370 \quad 6. 2.4 = 2.400 \quad 7. 6.05 = 6.050 \quad 8. 1.6 = 1.600$$

Write each decimal as a fraction or as a whole number and fraction.

$$9. 0.8 = \frac{8}{10} \quad 10. 1.45 = 1\frac{45}{100} \quad 11. 3.12 = 3\frac{12}{100} \quad 12. 0.167 = \frac{167}{1000}$$

Write each fraction as a decimal.

$$13. \frac{42}{100} = 0.42 \quad 14. \frac{371}{1000} = 0.371 \quad 15. 1\frac{3}{10} = 1.3$$

$$16. \frac{36}{1000} = 0.036 \quad 17. \frac{5}{100} = 0.05 \quad 18. 6\frac{1}{1000} = 6.001$$

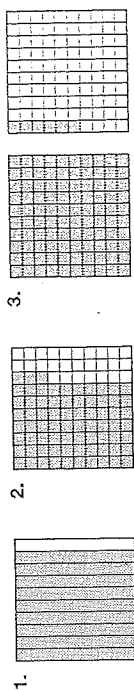
Section A: Introduction to Decimals

Decimals 3

Name _____ Date _____ Class _____

SKILL 2: Practice

Write a decimal and fraction for each number shown.



$$0.9 = \frac{9}{10} \quad 0.73 = \frac{73}{100} \quad 1.06 = \frac{106}{100}$$

Write each decimal as an equivalent decimal to the place value given.

$$\begin{array}{ll} 4. 0.9 = 0.900 \text{ [thousandths]} & 5. 2.20 = 2.2 \text{ [tenths]} \\ 6. 1.25 = 1.250 \text{ [thousandths]} & 7. 9.8 = 9.8000 \text{ [ten-thousandths]} \\ 8. 3.890 = 3.89 \text{ [hundredths]} & 9. 0.02 = 0.020 \text{ [thousandths]} \\ 10. 5.7 = 5.70 \text{ [hundredths]} & 11. 0.300 = 0.3 \text{ [tenths]} \end{array}$$

Write each decimal as a fraction or as a whole number and fraction.

$$12. 0.1 = \frac{1}{10} \quad 13. 1.5 = 1\frac{5}{10} \quad 14. 0.42 = \frac{42}{100} \quad 15. 0.2583 = \frac{2583}{10000}$$

Write each fraction as a decimal.

$$16. \frac{374}{1000} = 0.374 \quad 17. 81\frac{7}{10} = 81.7 \quad 18. 1\frac{19}{100} = 1.19 \quad 19. \frac{3}{100} = 0.03$$

There are 100 cents in a dollar, so writing dollars and cents is like writing a decimal in hundredths.

$$\begin{array}{ll} 20. \text{ Write twelve dollars and fifty cents as a decimal.} & \$12.50 \\ 21. \text{ Write four dollars as a decimal.} & \$4.00 \\ 22. \text{ Write seventy-five cents as a decimal.} & \$0.75 \end{array}$$



23. Which is 1.4 written as a decimal in thousandths?

- (A) 1.400
B 1.040
C 1.40
D 1.004

Skill 2

24. Which is the decimal for thirty-two hundredths?

- F 3200
G 0.032
H 32
J 0.32

Skill 1

4 Decimals

Section A: Introduction to Decimals

SKILL 3:

Comparing and Ordering Decimals

Student pages 5-6

Name _____ Date _____ Class _____



SKILL 3: Comparing and Ordering Decimals

To compare two decimals, write the decimals so that they have the same number of digits after the decimal point. Then compare the digit in each place value starting at the left.

Example 1

Use $>$ or $<$ to compare 0.08 and 0.6.

Step 1: Annex zeros so that both decimals have the same number of digits after the decimal point.

Step 2: Compare the digits in each place-value position, starting at the left.

0.08
0.60

The ones digits are the same. Compare the digits in the tenths place. $6 > 0$.

Since 6 tenths $>$ 0 tenths, $0.6 > 0.08$.

Example 2

Order from least to greatest: 0.725, 0.22, 1.7.

Annex zeros so all number are in thousandths.

Compare the ones. $1 > 0$, so 1.7 is the greatest number.
Compare the tenths. $7 > 2$, so 0.725 is the next number.
That means 0.22 must be the least number.

0.725 = 0.725

0.22 = 0.220

1.7 = 1.700 From least to greatest, the numbers are 0.22, 0.725, and 1.7.

Guided Practice

Use $>$, $<$, or $=$ to compare 3.419 and 3.48.

1. a. Write 3.48 in thousandths. 3.480

b. Compare the digits. Start with the ones digit: $3 = 3$.

Compare the tenths: $4 = 4$.

Compare the hundredths: $1 < 8$.

c. So, $3.419 < 3.48$.

Use $>$, $<$, or $=$ to compare each pair of numbers.

2. $2.33 > 2.033$ 3. $41.039 < 41.05$ 4. $0.450 = 0.45$

Order from least to greatest.

5. 3.04, 0.304, 0.34 0.304, 0.34, 3.04
6. 11.011, 10.101, 10.011 10.011, 10.101, 11.011

Section A: Introduction to Decimals

Decimals 5

Name _____ Date _____ Class _____

SKILL 3: Practice

Use $>$, $<$, or $=$ to compare each pair of numbers.

1. $0.4 < 0.6$ 2. $2.46 > 2.41$ 3. $9.83 < 9.831$

4. $0.5 > 0.416$ 5. $0.387 > 0.378$ 6. $4.8 < 4.83$

7. $12.75 > 12.749$ 8. $5.03 = 5.030$ 9. $23.65 > 22.66$

10. $7.382 < 7.823$ 11. $89.6 > 89.06$ 12. $5.36 < 6.35$

Order from least to greatest.

13. 0.4, 0.7, 0.3 0.3, 0.4, 0.7

14. 5.68, 5.73, 5.51 5.51, 5.68, 5.73

15. 21.6, 21.006, 21.06 21.006, 21.06, 21.6

16. 1.88, 0.888, 1.8 0.888, 1.8, 1.88

17. 8.23, 8.132, 8.123, 8.213 8.123, 8.132, 8.213, 8.23

18. 6.57, 5.68, 5.67, 5.87 5.67, 5.68, 5.87, 6.57

Find each answer.

19. Order the names of the cities shown in the table from the city with the greatest amount of rainfall to the city with the least amount of rainfall.

New York, Atlanta, Seattle

20. Indianapolis had 1,193 meters of rainfall. After which city in your list would you put Indianapolis?

New York

Rainfall (recent year)	
City	Rainfall
Atlanta	1,172 in
New York	1,237 in
Seattle	1,119 in



21. Which list shows numbers in order from least to greatest? **Skill 3**

A 2.3, 2.03, 2.033
B 2.03, 2.033, 2.3
C 2.3, 2.033, 2.03
D 2.033, 2.3, 2.03

22. Which is 1.042 written in words? **Skill 1**

F one and forty-two hundredths
G one forty-two hundredths
H one and forty-two thousandths
J one thousand forty-two

Section A: Introduction to Decimals

Decimals 5

SKILL 4: Rounding Decimals

Student pages 7-8

Name _____ Date _____ Class _____



SKILL 4: Rounding Decimals

The rules for rounding decimals are similar to those for rounding whole numbers.

Example 1

Round 34.0692 to the nearest hundredth.

Step 1: Find the place to which you want to round.

34.0692

Step 2: Look at the digit to its right.
Step 3: If this digit is 5 or greater, round up. If it is less than 5, round down.

Step 4: Drop the digits to the right.

34.07 Round up to 34 and 7 hundredths.

So, 34.0692 rounded to the nearest hundredth is 34.07.

Example 2

Round 3.97 to the nearest tenth.

3.97 The digit to the right of 9 tenths is 7, so round up.

4.0 The 0 in the tenths place shows rounding to the nearest tenth.

3.97 rounds to 4.0 when rounded to the nearest tenth.

Example 3

Round \$6.35 to the nearest dollar.

\$6.35 The whole number is 6. The digit to the right is less than 5, so round down by dropping the digits to the right of the 6.

\$6.35 rounds to \$6, or \$6.00, when rounded to the nearest dollar.

Guided Practice

Round 0.249 to the nearest tenth.

1. The tenths digit is 2.

2. The digit to the right of the tenths digit is 4.

3. Do you round up or down? Why? Down. 4 < 5

4. To the nearest tenth, 0.249 rounds to 0.2.

Name the place value of the underlined digit. Then round to this place.

5. 4.652 tenths 4.7

6. 19.304 hundredths 19.30

7. 59.9 ones 60

Section A: Introduction to Decimals

Decimals 7

Section A

Name _____ Date _____ Class _____

SKILL 4: Practice

Give the place value of the underlined digit. Then round the number to this place value.

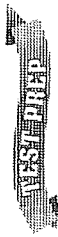
- 42.4 ones 42 tenths 7.8 tenths 96.1 tenths
- 7.7961 tenths 96.1 tenths
- 96.08 tenths 96.1 tenths
- 1.881 hundredths 1.88 hundredths 21.0 tenths 13.204 thousandths
- 20.993 tenths 21.0 tenths
- 13.2043 thousandths 13.204 thousandths

Round to the underlined place value.

- 27.27 27 8.19185 191.9 9.796.301 796.3 10.7.094 7.1
- 298.99 299 12.0.555 0.6 13.0.6921 0.692 14.409.7 410
- 0.607 0.61 16.1.009 1.01 17.33.255 33.3 18.1.02479 1.0248
- 3.042 3.0 20.8.1919 8.19 21.50.96 51.0 22.71.6 72

Marc said that to the nearest dollar, he spent \$15.00 on a CD. Find each answer.

- What is the least amount that Marc could have spent? \$14.50
- What is the greatest amount that Marc could have spent? \$15.49



25. Which shows 1.356 rounded to the nearest tenth?

- A 1.3 C 1.35
B 1.4 D 1.36

Skill 4

26. Which is 0.06 written as a fraction?

- F $\frac{6}{1,000}$ G $\frac{6}{10}$
H $\frac{6}{100}$ J $\frac{6}{6}$

Skill 2

8 Decimals

Section A: Introduction to Decimals

SKILL 5:

Estimating Sums and Differences

Student pages 9-10

Name _____ Date _____ Class _____



SKILL 5: Estimating Sums and Differences

You can use what you know about rounding decimals to estimate sums and differences. Round each number to the same place. Then add or subtract.

Example

Estimate: $\$12.89 + \14.29 . Round to the nearest dollar.

Round each number to the nearest dollar by looking at the digit to the right of the ones place. Then add.

The estimated sum is \$27.

Guided Practice

Estimate each sum or difference by first rounding each number to the nearest whole number.

1. Estimate: $12.897 - 4.331$.

$$\begin{array}{r} 12.897 \rightarrow 13 \\ - 4.331 \rightarrow 4 \\ \hline 9 \end{array}$$

Then subtract.

$$\begin{array}{r} 12.897 \rightarrow 13 \\ - 4.331 \rightarrow 4 \\ \hline 9 \end{array}$$

Then add.

2. Estimate: $23.443 + 5.09 + 0.87$.

$$\begin{array}{r} 23.443 \rightarrow 23 \\ + 5.09 \rightarrow 5 \\ + 0.87 \rightarrow 1 \\ \hline 29 \end{array}$$

Then add.

$$\begin{array}{r} 3. \$23.78 \\ + 79.82 \\ \hline \$104 \end{array}$$

$$\begin{array}{r} 5. \$54.88 \\ - 23.40 \\ \hline \$32 \end{array}$$

$$\begin{array}{r} 6. 188.36 \\ - 59.99 \\ \hline 128 \end{array}$$

$$\begin{array}{r} 7. \$3.49 + \$7.73 + \$2.52 \\ \$3 + \$8 + \$3 = \$14 \end{array}$$

$$\begin{array}{r} 8. 16.662 - 10.25 \\ 17 - 10 = 7 \end{array}$$

$$\begin{array}{r} 9. \$5.85 - \$1.05 \\ \$6 - \$1 = \$5 \end{array}$$

$$\begin{array}{r} 10. \$6.75 + \$8.00 + \$2.10 \\ \$7 + \$1 + \$2 = \$10 \end{array}$$

$$\begin{array}{r} 11. 121.5 - 0.95 \\ 122 - 1 = 121 \end{array}$$

$$\begin{array}{r} 12. 15.8 + 16.05 + 3 \\ 16 + 16 + 3 = 35 \end{array}$$

Section A: Introduction to Decimals

Decimals 9

Name _____ Date _____ Class _____

SKILL 5: Practice

Estimate by first rounding to the nearest whole number.

$$\begin{array}{r} 1. 30.2 \\ + 15.5 \\ \hline 46 \end{array}$$

$$\begin{array}{r} 2. 99.7 \\ + 60.22 \\ \hline 160 \end{array}$$

$$\begin{array}{r} 3. 4.216 \\ + 8.19 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 4. \$ 59.11 \\ + 37.95 \\ \hline \$97 \end{array}$$

$$\begin{array}{r} 5. 19.5 \\ - 0.68 \\ \hline 19 \end{array}$$

$$\begin{array}{r} 6. 20.35 \\ - 14.527 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 7. 48.32 \\ - 6.1 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 8. \$ 62.29 \\ - 9.75 \\ \hline \$52 \end{array}$$

$$9. 3.9 + 35.4 \quad 39$$

$$10. 78.03 - 10.4 \quad 68$$

$$11. 88.4 + 5.2 + 6.7 \quad 100$$

$$12. 47.3 + 8.92 + 2.0 \quad 58$$

$$13. \$71.94 - \$4.28 \quad \$68$$

$$14. \$88.40 + \$8.55 \quad \$97$$

$$15. 37.941 - 13.07 \quad 25$$

$$16. \$147.80 - \$104.50 \quad \$43$$

$$17. 5.6 + 13.1 \quad 19$$

$$18. 30.3 + 21.7 \quad 52$$

$$19. 3.7 - 0.81 \quad 3$$

$$20. \$19.25 - \$3.95 \quad \$15$$

$$21. 17.012 - 1.8 \quad 15$$

$$22. 65.75 + 13.02 \quad 79$$

$$23. 18.65 + 2.3 \quad 21$$

$$24. 31.26 + 0.995 \quad 32$$

$$25. \$1.99 + \$3.40 + \$3.88 + \$0.97 \quad \$10$$

Solve.

26. Estimate the cost of a ball and a bat.

$$\begin{array}{r} \$25 \\ + \$25 \\ \hline \$49 \end{array}$$

27. Estimate the cost of shoes and a glove.

$$\begin{array}{r} \$25 \\ + \$16 \\ \hline \$41 \end{array}$$

28. Kim paid for a ball with a \$20 bill.

Estimate how much change she received.

$$\begin{array}{r} \$20 \\ - \$11 \\ \hline \$9 \end{array}$$

Baseball Equipment	
Shoes	\$29.75
Bat	\$16.49
Ball	\$8.89
Glove	\$19.19

29. Estimate the sum: $12.346 + 6.9$.
Skill 5

A 20
B 18

C 19
D 18.246

30. Which number is greater than 1.104?

F 1.014
G 1.044

H 1.144
J 0.444

Skill 3

10 Decimals

Section A: Introduction to Decimals

SKILL 6: Adding Decimals

Student pages 11-12

Name _____ Date _____ Class _____



SKILL 6: Adding Decimals

When you add decimals, first line up the decimal points and put the decimal point in the answer. Annex zeros, if necessary so each decimal has the same number of decimal places. Then add.

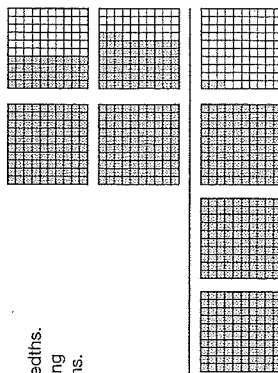
Example

Add: $1.4 + 1.63$

Line up the decimal points. Put the decimal point in the answer.

$$\begin{array}{r} 1.4 \\ + 1.63 \\ \hline 3.03 \end{array}$$

Write 1.4 in hundredths. Then add, beginning with the hundredths.



The sum of 1.4 and 1.63 is 3.03. The model shows this sum.

Guided Practice

Add.

1. $0.059 + 0.6$

Line up the decimal points. Put the decimal point in the answer.

$$\begin{array}{r} 0.059 \\ + 0.600 \\ \hline 0.659 \end{array}$$

Annex zeros to show thousandths. Then add.

3. $0.6 + 0.7$

Line up the decimal points. Put the decimal point in the answer.

$$\begin{array}{r} 0.6 \\ + 0.7 \\ \hline 1.3 \end{array}$$

Annex zeros to show hundredths. Then add.

5. $2.026 + 0.42$

$$\begin{array}{r} 2.026 \\ + 0.42 \\ \hline 2.446 \end{array}$$

9. $1.073 + 9.4 = 10.473$

2. $1.2 + 0.23 + 4$

Line up the decimal points. Put the decimal point in the answer.

$$\begin{array}{r} 1.20 \\ + 0.23 \\ + 4.00 \\ \hline 5.43 \end{array}$$

Annex zeros to show hundredths. Then add.

4. $3.05 + 2.09$

$$\begin{array}{r} 3.05 \\ + 2.09 \\ \hline 5.14 \end{array}$$

7. $6 + 8.21$

$$\begin{array}{r} 6.00 \\ + 8.21 \\ \hline 14.21 \end{array}$$

10. $14.72 + 27 + 0.629 = 42.349$

8. $6.75 + 15.33$

$$\begin{array}{r} 6.75 \\ + 15.33 \\ \hline 22.08 \end{array}$$

Section A: Introduction to Decimals

Decimals 11

Name _____ Date _____ Class _____

SKILL 6: Practice

Add.

1. $0.6 + 0.3 = 0.9$

3. $2.9 + 0.8 = 3.7$

4. $1.08 + 0.06 = 1.14$

5. $6.4 + 9.8 = 16.2$

7. $8.37 + 1.98 = 10.35$

8. $1.02 + 0.876 = 1.896$

9. $42.9 + 7.463 = 50.363$

11. $10.8 + 1.2 = 12.0$

12. $13.8 + 8.6 = 22.4$

13. $75.452 + 82.7 = 158.152$

15. $6.256 + 1.498 = 7.754$

16. $43.007 + 18.404 = 61.411$

17. $0.5 + 0.5 = 1.0$

18. $2.05 + 5.08 = 7.13$

19. $50.5 + 8.176 = 58.676$

20. $17.84 + 9.217 = 27.057$

21. $0.6 + 9.75 + 11 = 21.35$

22. $18.20 + 43.39 = 61.59$

23. $0.25 + 4.086 = 4.336$

24. $1.75 + 2.39 + 6.56 = 10.7$

25. $8.91 + 11.4 + 0.006 = 20.316$

26. $3.618 + 4.021 + 9 = 16.639$

Solve.

The times for two teams in a 400-meter relay are shown in the table.

400-Meter Relay			
Team	1st 200 m	2nd 200 m	
Team A	2.92 min	4.01 min	
Team B	3.00 min	3.95 min	

27. What was the total time for Team A? **6.93 min**

28. What was the total time for Team B? **6.95 min**

29. Which team won the relay? **Team A**



30. Add: $4.055 + 16.2$

Skill 6

- A 5.675 C 4.217 F 5 H 5.8
B 20.255 D 10.255 **G** 5.9 J 5.87

31. Round 5.872 to the nearest tenth.
 Skill 4
 F 5 H 5.8
G 5.9 J 5.87

Section A: Introduction to Decimals

Decimals 11

SKILL 7: Subtracting Decimals

Student pages 13-14

Name _____ Date _____ Class _____



SKILL 7: Subtracting Decimals

When you subtract decimals, first line up the decimal points and put the decimal point in the answer. Annex zeros, if necessary, so each decimal has the same number of decimal places. Then subtract.

Example 1

$$\text{Subtract } 30.07 - 4.9.$$

Line up the decimal points. Put the decimal point in the answer. Subtract the hundredths.

$$\begin{array}{r} 30.07 \\ - 4.90 \\ \hline \end{array}$$

Since $9 > 0$, you need to rename before you can subtract the tenths. Rename 3 tens as 2 tens and 10 ones.

$$\begin{array}{r} 29.10 \\ - 4.90 \\ \hline \end{array}$$

Rename 10 ones as 9 ones and 10 tenths. Then finish subtracting, beginning with the tenths.

$$\begin{array}{r} 29.10 \\ - 4.90 \\ \hline \end{array}$$

$$30.07 - 4.9 = 25.17.$$

Guided Practice

Subtract.

$$1. 1.006 - 0.8$$

Line up the decimal points.

Put the decimal point in the answer. Annex zeros to show thousandths.

$$\begin{array}{r} 1.006 \\ - 0.800 \\ \hline \end{array}$$

Subtract the thousandths and hundredths. When you subtract the tenths, first rename 1 one as 0 ones and 10 tenths.

$$\begin{array}{r} 3. 6.27 \\ - 0.94 \\ \hline \end{array}$$

$$7. 9 - 6.84 = 2.16$$

$$9. 2.3 - 2.24 = 0.06$$

$$2. 74 - 13.49$$

Line up the decimal points.

Put the decimal point in the answer. Annex zeros to show hundredths.

$$\begin{array}{r} 74.00 \\ - 13.49 \\ \hline \end{array}$$

Before you subtract the hundredths, rename 4 ones as 3 ones and 10 tenths. Rename 10 tenths as 9 tenths and 10 hundredths. Then subtract.

$$\begin{array}{r} 5. 18.63 \\ - 12.65 \\ \hline \end{array}$$

$$8. 50.87 - 4.271 = 46.599$$

$$10. 10 - 1.1 = 8.9$$

Name _____ Date _____ Class _____

SKILL 7: Practice

Subtract.

$$\begin{array}{r} 1. 9.8 \\ - 7.8 \\ \hline \end{array}$$

$$2. 47.09 - 36 = 11.09$$

$$3. 8.25 - 6.62 = 1.63$$

$$4. 65.42 - 41.6 = 23.82$$

$$5. 3.421 - 0.409 = 3.012$$

$$6. 9.3 - 4.546 = 4.754$$

$$7. 62.04 - 29.004 = 33.036$$

$$8. 18.902 - 6.604 = 12.298$$

$$9. 15.306 - 8.73 = 6.576$$

$$10. 14.3 - 3.429 = 10.871$$

$$11. 63.48 - 53.7 = 9.78$$

$$12. 37.49 - 33.922 = 3.568$$

$$13. 16 - 15.86 = 0.14$$

$$14. 21 - 3.38 = 17.62$$

$$15. 91.96 - 90.97 = 0.99$$

$$16. 12.004 - 4.873 = 7.131$$

$$17. 49.071 - 20 = 29.071$$

$$18. 18.20 - 9.54 = 8.66$$

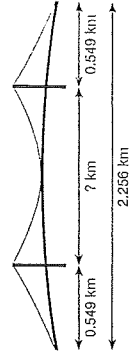
$$19. 74 - 15.473 = 58.527$$

$$20. 52 - 6.091 = 45.909$$

Solve.

21. You buy a CD for \$12.99. You pay with a \$20 bill. How much change should you get back? \$7.01

22. The diagram shows the total length of the Mackinac Bridge, including the two approaches. What is the length of the main (middle) span of the bridge?



$$\underline{1.158 \text{ km}}$$



23. Subtract: $3.04 - 0.266$.

$$\begin{array}{r} A \ 3.264 \\ B \ 2.774 \\ C \ 2.786 \\ D \ 0.78 \end{array}$$

Skill 7

24. Estimate $13.455 + 59.845$. Round to the nearest whole number.

$$\begin{array}{r} F \ 73 \\ G \ 47 \\ H \ 72 \\ J \ 73.3 \end{array}$$

Skill 5

SKILL 8: PROBLEM SOLVING: Adding and Subtracting Decimals

Student pages 15-16

Name _____ Date _____ Class _____



SKILL 8: PROBLEM SOLVING: Adding and Subtracting Decimals

When solving word problems involving addition or subtraction of decimals, it is important that you know when to add and when to subtract.

Example

The table shows that Fu Mingxia won the gold medal for platform diving in both 1992 and 1996. In 1996, she improved her score by 60.15 points. Find her 1996 score.

Read What are the key facts?

Plan Are you going to add or subtract?

Her score was 60.15 higher, so add 461.43 and 60.15.

Solve Add.
$$\begin{array}{r} 461.43 \leftarrow \text{1992 score} \\ + 60.15 \leftarrow \text{Increase in score} \\ \hline 521.58 \leftarrow \text{1996 score} \end{array}$$

Mingxia's 1996 score was 521.58 points.

Look Back See whether your answer makes sense.

Mingxia's 1996 score was higher than her 1992 score. 521.58 is greater than 461.43. The answer makes sense.

Olympic Platform Diving Gold Medal Winners		
Year	Diver	Points
1984	Zhou Jihong	435.51
1988	Xu Yannel	445.20
1992	Fu Mingxia	461.43
1996	Fu Mingxia	

Guided Practice

Compare Yannel's 1988 score and Jihong's 1984 score. How many more points did Yannel score?

1. How many points did Yannel score? 445.20

2. How many points did Jihong score? 435.51

3. Will you add or subtract to find how many more points Yannel scored? Subtract

4. How many more points did Yannel score? 9.69

In springboard diving, Gao Min scored 580.23 points in 1988 and 572.40 points in 1992.

5. In which year did she score fewer points? 1992

6. How many fewer points? 7.83

Section A: Introduction to Decimals

Decimals 15

Name _____

Date _____

Class _____

SKILL 8: Practice

Solve each problem.

The table shows record catches for freshwater fish.

1. What is the difference between the weight of the trout and the weight of the whitefish?

0.125 lb

2. How much more did the bass weigh than the catfish?

3.375 lb

3. Brian caught three brook trout that weighed 4.8 pounds, 3.54 pounds, and 2.71 pounds. What was the total weight of the three fish?

11.05 lb

4. How much more did the record brook trout weigh than the three trout that Brian caught?

3.45 lb

Use the map at the right.

5. How far is it from the tennis court to the beach by way of the ballpark?

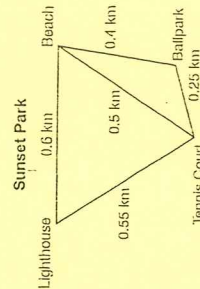
0.65 km

6. How much shorter is the direct path from the tennis court to the beach than going to the beach by way of the ballpark?

0.15 km

7. How far is it around Sunset Park using the four outside paths?

1.8 km



The odometer readings (in miles) on Mr. Quinlin's car are shown at the beginning of a trip and at the end of a trip.

8. How far did he drive?

- A 545.7 mi
B 534.7 mi
C 544.7 mi
D 5,150.5 mi

9. What is his ending reading rounded to the nearest whole mile?

- F 12,847
G 12,848
H 12,850
J 12,847.6

Beginning: **1 2 3 0 2.9**

End: **1 2 8 4 7.6**

Skill 4

16 Decimals

Section A: Introduction to Decimals

SKILL 9:

Multiplying a Whole Number by a Decimal

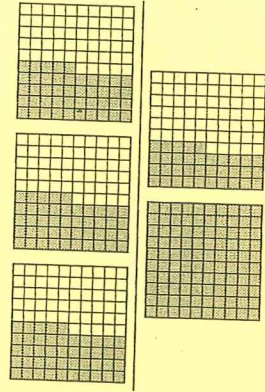
Student pages 19-20

Name _____ Date _____ Class _____



SKILL 9: Multiplying a Whole Number by a Decimal

One way to find the product of a decimal and a whole number, such as 3×0.45 , is to use repeated addition. The grids show that $0.45 + 0.45 + 0.45 = 1.35$.



To multiply a whole number by a decimal, multiply as you would whole numbers. Count the total number of digits to the right of the decimal point in both factors. Write the answer with the same number of decimal places.

Example

Multiply: 3×0.45 .

Count the digits to the right of the decimal point in each factor.

$$\begin{array}{r} 0.45 \leftarrow 2 \text{ decimal places} \\ \times 3 \leftarrow 0 \text{ decimal places} \\ \hline 1.35 \leftarrow 2 \text{ decimal places} \end{array}$$

Put the decimal point in the answer.

$$\begin{array}{r} 0.45 \\ \times 3 \\ \hline 1.35 \end{array}$$

There are 2 digits after the decimal point in the factors, so the product has 2 decimal places.

$3 \times 0.45 = 1.35$

Guided Practice

Place a decimal point in each product.

1. $1.279 \leftarrow 3 \text{ decimal places}$
 $\times 5 \leftarrow 0 \text{ decimal places}$
 $6395 \leftarrow 3 \text{ decimal places}$

3. $8.6 \leftarrow 1 \text{ decimal place}$
 $\times 40 \leftarrow 0 \text{ decimal places}$
 $3440 \leftarrow 1 \text{ decimal place}$

Multiply.

5. $\$25.50 \times 7 = \178.50

6. $13 \times 0.274 = 3.562$

Section B: Multiplying Decimals

Decimals 19

Name _____ Date _____ Class _____

SKILL 9: Practice

Place a decimal point in each product.

1. $12 \times 8.76 = 105.12$ 2. $4.67 \times 7 = 32.69$ 3. $8 \times 17.6 = 140.8$
 4. $2.831 \times 3 = 8.493$ 5. $0.236 \times 21 = 4.956$ 6. $3.375 \times 8 = 27.000$

Multiply.

7. $0.4 \times 6 = 2.4$ 8. $0.39 \times 3 = 1.17$ 9. $0.12 \times 7 = 0.84$ 10. $8.3 \times 6 = 49.8$

11. $0.208 \times 24 = 4.992$ 12. $1.022 \times 15 = 15.33$ 13. $3.7 \times 65 = 240.5$ 14. $0.52 \times 26 = 13.52$

15. $324 \times 0.28 = 90.72$ 16. $\$25.98 \times 12 = \311.76

17. $1.65 \times 10 = 16.5$ 18. $8.111 \times 9 = 72.999$

19. $18 \times 14.1 = 253.8$ 20. $6 \times 3.422 = 20.532$

21. $\$1.02 \times 60 = \61.20 22. $9 \times 200.4 = 1803.6$

Solve.

23. The Beast, a roller coaster in Cincinnati, Ohio, is 1.4 miles long. How far would you travel in 5 rides?

7 mi

24. The Dragon King in Salou, Spain, has a track that is 0.789 mile long. How far would you travel in 3 rides?

2.367 mi



25. Multiply: 53×0.27 .

A 4.77 C 1.431
 B 14.31 D 143.1

26. Add: $4.86 + 3.7$.

F 7.56 H 8.5
 G 8.56 J 4.33

Skill 6

Section B: Multiplying Decimals

20 Decimals

SKILL 10:

Multiplying a Decimal by 10, 100, or 1,000

Student pages 21-22

Name _____

Date _____

Class _____

SKILL 10: Multiplying a Decimal by 10, 100, or 1,000

Look for a pattern. Notice how the product increases and the decimal point moves when you multiply by 10, 100, or 1,000.

$$\begin{array}{l} 10 \times 25 = 250 \\ 100 \times 25 = 2,500 \\ 1,000 \times 25 = 25,000 \end{array} \quad \begin{array}{l} 10 \times 2.5 = 25 \\ 100 \times 2.5 = 250 \\ 1,000 \times 2.5 = 2,500 \end{array} \quad \begin{array}{l} 10 \times 0.025 = 0.25 \\ 100 \times 0.025 = 2.5 \\ 1,000 \times 0.025 = 25 \end{array}$$

To multiply by 10, 100, or 1,000, move the decimal point one place to the right for each zero in 10, 100, or 1,000. Sometimes you will need to annex zeros to show the product.

Example

Multiply 5.38 by 10, 100, and 1,000.

$$\begin{array}{l} 5.38 \times 10 = 53.8 \\ 10 \text{ has one zero.} \\ \text{Move the decimal point one place to the right.} \end{array} \quad \begin{array}{l} 5.38 \times 100 = 538 \\ 100 \text{ has two zeros.} \\ \text{Move the decimal point two places to the right.} \end{array} \quad \begin{array}{l} 5.38 \times 1,000 = 5,380 \\ 1,000 \text{ has three zeros.} \\ \text{Move the decimal point three places to the right.} \\ \text{Annex a zero.} \end{array}$$

Note: When the product is a whole number, no decimal point is needed.

Guided Practice

Place the decimal point in the product. Annex zeros if necessary.

- $3.185 \times 10 = 31.85$
- $3.185 \times 100 = 318.5$
- $3.185 \times 1,000 = 3,185$
- $7.84 \times 10 = 78.4$
- $7.8 \times 100 = 780$
- $7.8 \times 1,000 = 7,800$
- $0.3 \times 10 = 3$
- $0.03 \times 100 = 3$
- $0.03 \times 1,000 = 30$

Multiply.

- $10 \times 0.6 = 6$
- $100 \times 0.043 = 4.3$
- $0.65 \times 1,000 = 650$
- $100 \times 0.007 = 0.7$
- $1.6537 \times 100 = 165.37$
- $0.0788 \times 1,000 = 78.8$

Section B: Multiplying Decimals

Decimals 21

Section B

Name _____

Date _____

Class _____

SKILL 10: Practice

Multiply.

- $10 \times 0.5 = 5$
- $100 \times 0.05 = 5$
- $1,000 \times 0.005 = 5$
- $10 \times 0.67 = 6.7$
- $100 \times 0.67 = 67$
- $100 \times 1,000 = 670$
- $1,000 \times 3.42 = 3,420$
- $100 \times 45.6 = 4,560$
- $3.65 \times 1,000 = 3,650$
- $0.5713 \times 100 = 57.13$
- $0.008 \times 10 = 0.08$
- $8.9 \times 10 = 89$
- $10 \times 3.657 = 36.57$
- $0.06 \times 1,000 = 60$
- $1.12 \times 10 = 11.2$
- $0.4671 \times 1,000 = 467.1$
- $1,000 \times 0.001 \times 0 = 0$
- $100 \times 0.01 \times 100 = 100$
- $3.261 \times 1,000 = 3,261$
- $10 \times 0.004 = 0.04$
- $58.02 \times 100 = 5,802$
- $1,000 \times 7.2 = 7,200$
- $10 \times 0.389 = 3.89$
- $65.2 \times 1,000 = 65,200$

Solve.

- A baseball must weigh between 5 ounces and 5.25 ounces. Ten baseballs would weigh between 50 ounces and 52.5 ounces.
- A tennis ball must weigh between 2 ounces and 2.065 ounces. Ten tennis balls would weigh between 20 ounces and 20.65 ounces.
- A football must be at least 10.875 inches long. What is the shortest total length of 100 of these footballs laid end to end? 1,087.5 in.



- Multiply: 26.7×100 .
(A) 2,670 (B) 0.267 (C) 26,700 (D) 267
- Which number is less than 3.011?
F 3.111 (G) 3.101 (H) 3.001 (J) 3.101

22 Decimals

Section B: Multiplying Decimals

SKILL 11: Estimating Products

Student pages 23-24

Name _____ Date _____ Class _____



SKILL 11: Estimating Products

To estimate products, round each factor so that the computation is easy. Then multiply mentally.

Example 1

Estimate: 386×2.9 .

386×2.9 Round 386 to 400.

$\downarrow \downarrow$ Round 2.9 to 3.

$400 \times 3 = 1,200$ Multiply 400×3 mentally.

An estimate of this product is 1,200.

Example 2

Estimate: 0.75×6.099 .

0.75×6.099 Round 0.75 to 0.8.

$\downarrow \downarrow$ Round 6.099 to 6.

$0.8 \times 6 = 4.8$ Then multiply. Remember

to put the decimal point in the answer.

An estimate of this product is 4.8.

Guided Practice

Estimate each product. Round each factor to make the computation easy.

1. 3.81×3.1
 $\downarrow \downarrow$
 $4 \times 3 = 12$

2. 12.34×9.5
 $\downarrow \downarrow$
 $10 \times 10 = 100$

3. 0.513×7.47
 $\downarrow \downarrow$
 $0.5 \times 7 = 3.5$

Estimate each product. Show what numbers you used. Answers may vary. Accept any reasonable estimates.

4. 0.93×8.7
 $\downarrow \downarrow$
 $0.9 \times 9 = 8.1$

5. 4.3×375.9
 $\downarrow \downarrow$
 $4 \times 400 = 1,600$

6. 3.2×0.7
 $\downarrow \downarrow$
 $3 \times 0.7 = 2.1$

7. 8.7×49.61
 $\downarrow \downarrow$
 $9 \times 50 = 450$

8. 6.67×0.35
 $\downarrow \downarrow$
 $7 \times 0.4 = 2.8$

9. 27.6×0.05
 $\downarrow \downarrow$
 $30 \times 0.05 = 1.5$

Name _____ Date _____ Class _____

SKILL 11: Practice

Estimate each product. Round to make the computation easy.

Answers may vary. Accept any reasonable estimates.

1. 6.43×8.7
 $\downarrow \downarrow$

2. 34.5×9.6
 $\downarrow \downarrow$

3. 3.07×1.85
 $\downarrow \downarrow$

$6 \times 9 = 54$

$30 \times 10 = 300$

$3 \times 2 = 6$

4. 93.9×0.4
 $\downarrow \downarrow$

5. 0.49×5.1
 $\downarrow \downarrow$

6. 106.9×0.008
 $\downarrow \downarrow$

$90 \times 0.4 = 36$

$0.5 \times 5 = 2.5$

$100 \times 0.008 = 0.8$

7. 9.832×6.5
 $\downarrow \downarrow$

8. 14.3×7.08
 $\downarrow \downarrow$

9. 22.049×3.27
 $\downarrow \downarrow$

10. 4.63×0.9
 $\downarrow \downarrow$

11. 6.2×7.746
 $\downarrow \downarrow$

12. 317×0.4
 $\downarrow \downarrow$

13. 6.15×99.9
 $\downarrow \downarrow$

14. 0.609×21.4
 $\downarrow \downarrow$

15. 7×0.083
 $\downarrow \downarrow$

16. 0.9×7.9
 $\downarrow \downarrow$

17. 32.1×4.8
 $\downarrow \downarrow$

18. 105.2×3.8
 $\downarrow \downarrow$

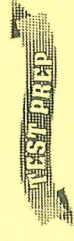
A light-year is the distance light travels in a year. It is about 9.5 trillion kilometers. Use this information to answer each question.

19. Alpha Centauri C is about 4.3 light-years from Earth. Estimate this distance in trillion kilometers. (Hint: Estimate 4.3×9.5 .)

40 trillion km

20. Sirius is about 8.6 light-years from Earth. Estimate this distance in trillion kilometers.

90 trillion km



21. Which of these is the best estimate for 19.06×8.7 ?

- (A) 180
B 18
C 1,800
D 0.018

Skill 11

22. Subtract: $9.7 - 0.74$.

- F 2.3
G 9.96
H 9.06
J 8.96

Skill 7

SKILL 12:

Multiplying a Decimal by a Decimal

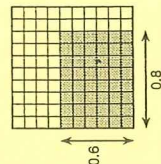
Student pages 25-26

Name _____ Date _____ Class _____



SKILL 12: Multiplying a Decimal by a Decimal

The rectangle on the grid is 0.8 unit long and 0.6 unit wide. Its area is 0.48 square unit, so $0.8 \times 0.6 = 0.48$.



To multiply two decimals, multiply as with whole numbers. Count the total number of digits to the right of the decimal point in both factors. Write the product with the same number of decimal places.

Example

Multiply: 0.48×0.52 .

Count the digits to the right of the decimal point in each factor.

$$\begin{array}{r} 0.52 \leftarrow 2 \text{ decimal places} \\ \times 0.48 \leftarrow 2 \text{ decimal places} \\ \hline 416 \leftarrow 4 \text{ decimal places} \\ 208 \\ \hline 2496 \end{array}$$

Put the decimal point in the answer.

$$\begin{array}{r} 52 \\ \times 48 \\ \hline 416 \\ 208 \\ \hline 2496 \end{array}$$

$0.48 \times 0.52 = 0.2496$

Estimate to check your answer.

$0.5 \times 0.5 = 0.25$. Since 0.25 is close to 0.2496, the answer is reasonable.

Guided Practice

Find each product. Check your answer by estimating.

- $1.6 \leftarrow 1 \text{ decimal place}$
 $\times 7.1 \leftarrow 1 \text{ decimal place}$
 $\hline 112$
 112
 $\hline 112$
 Estimate: $20 \times 7 = 140$
- $3.08 \leftarrow 2 \text{ decimal places}$
 $\times 8.9 \leftarrow 1 \text{ decimal place}$
 $\hline 272$
 272
 $\hline 272$
 Estimate: $3 \times 9 = 27$

3. Multiply: 7.07×4.9 .

- Total number of digits after the decimal point in the product: 3
- $707 \times 49 = 34,643$
- $7.07 \times 4.9 = 34.643$
- Estimated product: 35. Estimate may vary.

Section B: Multiplying Decimals

Decimals 25

Name _____ Date _____ Class _____

SKILL 12: Practice

Place a decimal point in each product.

- $3.7 \times 19.8 = 73.26$
- $5.7 \times 19.9 = 113.43$
- $2.9 \times 13.82 = 40.078$
- $10.2 \times 9.49 = 96.798$
- $12.14 \times 8 = 97.12$
- $0.02 \times 378.3 = 7.566$

Multiply. Estimate to check your answer.

$$\begin{array}{r} 7.509 \\ \times 0.9 \\ \hline 45.81 \end{array}$$

$$\begin{array}{r} 8.091 \\ \times 0.2 \\ \hline 0.182 \end{array}$$

$$\begin{array}{r} 10.036 \\ \times 0.7 \\ \hline 0.252 \end{array}$$

$$\begin{array}{r} 11.0678 \\ \times 1.2 \\ \hline 0.8136 \end{array}$$

$$\begin{array}{r} 13.56 \\ \times 4.8 \\ \hline 26.88 \end{array}$$

$$\begin{array}{r} 14.1252 \\ \times 1.6 \\ \hline 20.032 \end{array}$$

$$15.55.5 \times 0.7 = 38.85$$

$$16.1.02 \times 0.6 = 0.612$$

$$17.61.4 \times 0.5 = 30.7$$

$$18.0.9 \times 200.4 = 180.36$$

$$19.3.3 \times 38.8 = 128.04$$

$$20.4.7 \times 8.12 = 38.164$$

Solve. Remember that to find the area of a rectangle, you multiply the length by the width.

- A rectangular park is 1.5 miles long and 1.2 miles wide. Find the area in square miles.
1.8 sq mi
- A square floor tile measures 4.5 centimeters on each side. Find the area of the tile in square centimeters.
20.25 sq cm



23. Multiply: 0.27×6.4 .

- 17.28
- 572
- 1.728
- 1624

Skill 12

24. Pick a number so the decimals are in order. 7.022, _____, 7.002.
Skill 3

- 7.202
- 7.22
- 7.0
- 7.02

Section B: Multiplying Decimals

Decimals 25

SKILL 13: Zeros in Decimals Products

Student pages 27-28

Name _____

Date _____

Class _____

SKILL 13: Zeros in Decimal Products

When you multiply decimals, sometimes you must annex zeros to have the correct number of digits to the right of the decimal point.

Example

Multiply: 0.31×0.18 .

Count the numbers of digits to the right of the decimal point in each factor.

$\begin{array}{r} 0.18 \leftarrow 2 \text{ decimal places} \\ \times 0.31 \leftarrow 2 \text{ decimal places} \\ \hline 18 \\ 18 \\ \hline 54 \\ 558 \end{array}$	$\begin{array}{r} 0.18 \\ \times 0.31 \\ \hline 18 \\ 18 \\ \hline 54 \\ 558 \end{array}$
---	---

Annex zeros as needed in your answer.

So, $0.31 \times 0.18 = 0.0558$.

Estimate to check your answer:
 $0.3 \times 0.2 = 0.06$.
 Since 0.06 is close to 0.0558, the answer is reasonable.

Guided Practice

Find each product.

1. $0.102 \leftarrow 3$ decimal places
 $\times 0.45 \leftarrow 2$ decimal places
 $\hline 510$
 408
 $\hline 0.4590$

2. $5.07 \leftarrow 2$ decimal places
 $\times 0.073 \leftarrow 4$ decimal places
 $\hline 1521$
 3549
 $\hline 0.37011$

3. $0.028 \leftarrow 3$ decimal places
 $\times 0.5 \leftarrow 1$ decimal place
 $\hline 140$
 0140
 $\hline 0.0140$

4. $1.83 \leftarrow 2$ decimal places
 $\times 0.04 \leftarrow 2$ decimal places
 $\hline 732$
 0732
 $\hline 0.0732$

5. Multiply: 0.08×0.006 .

a. Total digits after the decimal point in the product: 5

b. $8 \times 6 = 48$

c. $0.08 \times 0.006 = 0.00048$

Name _____

Date _____

Class _____

SKILL 13: Practice

Find each product.

1. $0.028 \times 0.7 = 0.0196$

2. $1.83 \times 0.004 = 0.00732$

3. $0.0102 \times 0.0045 = 0.000459$

4. $4.12 \times 0.0043 = 0.017716$

5. $2.3 \times 0.015 = 0.0345$

6. $0.17 \times 0.03 = 0.0051$

7. $0.45 \times 0.08 = 0.036$

8. $0.098 \times 0.032 = 0.003136$

9. $0.035 \times 0.09 = 0.00315$

10. $2.34 \times 0.0005 = 0.00117$

11. $0.111 \times 0.04 = 0.00444$

12. $6.73 \times 0.011 = 0.07403$

13. $0.3 \times 0.002 = 0.0006$

14. $0.3 \times 0.2 = 0.06$

15. $0.003 \times 0.02 = 0.00006$

16. $12 \times 0.0005 = 0.006$

17. $0.09 \times 0.03 = 0.0027$

18. $0.07 \times 1.1 = 0.077$

19. $0.003 \times 0.6 = 0.0018$

20. $1.003 \times 0.007 = 0.007021$

21. $0.67 \times 0.01 = 0.0067$

22. $2.3 \times 0.0003 = 0.00069$

23. A pen costs \$0.75. Sales tax is 0.08 times the cost of the pen. How much sales tax will be paid? \$0.06

24. Find the product: 0.36×0.04 . Skill 13

25. Find the difference: $3 - 0.02$. Skill 7

Solve.

23. A pen costs \$0.75. Sales tax is 0.08 times the cost of the pen. How much sales tax will be paid? \$0.06

24. Find the product: 0.36×0.04 . Skill 13

25. Find the difference: $3 - 0.02$. Skill 7

A 0.0124 C 0.00124 F 0.01 H 2.98
 B 0.0144 D 0.00144 G 2.8 J 3.02

SKILL 14: PROBLEM SOLVING: Adding, Subtracting and Multiplying Money

Student pages 29-30

Name _____ Date _____ Class _____



SKILL 14: PROBLEM SOLVING: Adding, Subtracting, and Multiplying Money

Computing with money is like computing with decimals.

Example

Kami bought 5 regular hamburgers. How much did the hamburgers cost?

Plan You are to find the total cost of 5 hamburgers. Since each hamburger costs the same amount, you can multiply.

Solve Multiply.

$$\begin{array}{r} \$2.29 \leftarrow \text{Cost of one hamburger.} \\ \times 5 \leftarrow \text{Kami bought 5 hamburgers.} \\ \hline \$11.45 \leftarrow \text{Total cost} \end{array}$$

The hamburgers cost \$11.45.

Look back See if your answer makes sense. Each hamburger costs a little more than \$2. Since $5 \times \$2 = \10 , the answer makes sense.

Healthy Hamburgers Menu	
Regular Burger with cheese	\$2.29
Deluxe Burger with cheese	\$3.69
Salad	\$4.09
Beverage	\$1.59
Dessert	\$1.10
	\$1.39

Guided Practice

How much more does one deluxe hamburger cost than one regular hamburger?

- How much does one deluxe hamburger cost? \$3.69
- How much does one regular hamburger cost? \$2.29
- How are you going to find how much more one deluxe hamburger costs? **Subtract**
- How much more does one deluxe hamburger cost? \$1.40

How much does a regular hamburger with cheese and a beverage cost?

- How much does one hamburger with cheese cost? \$2.79
- How much does one beverage cost? \$1.10
- How are you going to find the answer? **Add**
- How much does a regular hamburger with cheese and a beverage cost? \$3.89

Section B: Multiplying Decimals

Decimals 29

Name _____ Date _____ Class _____

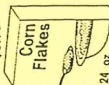
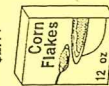
SKILL 14: Practice

Solve each problem.

- Use the Healthy Hamburger Menu on the previous page. How much would a deluxe hamburger with cheese, a salad, and a beverage cost? \$6.78
- Lauren earns \$4.50 an hour babysitting. How much will she earn in 3.5 hours? \$15.75
- How much change did Aaron get if he paid for a \$6.25 movie ticket with a \$20 bill? \$13.75
- Fines for overdue books at the Maple Park Library are \$.08 a day. What is the fine for a book that has been overdue for 14 days? \$1.12
- Apples are on sale for \$.85 a pound. How much would 2.5 pounds of apples cost? Round your answer to the nearest cent. \$2.13
- Ms. Ryder bought a birthday present for \$18.75, a card for \$1.98, and wrapping paper for \$2. How much did she spend? \$22.73
- A CD was marked \$12.50, but with sales tax it cost \$13.56. How much was the sales tax? \$1.06
- Mr. Kenny bought 8.2 gallons of gasoline that cost \$1.489 per gallon. How much did he pay for the gasoline? Round your answer to the nearest cent. \$12.21
- Randy has a coupon for \$.50 off the rental of a video. How much would he pay for a video that rents for \$2.49? \$1.99

\$2.11

\$3.79



- How much do you save (to the nearest thousandth) by buying a 24-ounce box of corn flakes instead of two 12-ounce boxes? \$1.43



- Frozen orange juice concentrate costs \$.02 per ounce. How much does a 64-ounce container cost? **Skill 14**
A \$.13 C \$12.80
B \$1.28 D \$64.02
- Which decimal is read two hundred twenty and four thousandths? **Skill 1**
F 0.224 H 224,000
G 220.04 J 220,004

30 Decimals

Section B: Multiplying Decimals

Section B

SKILL 15:

Dividing a Decimal by a Whole Number

Student pages 33-34

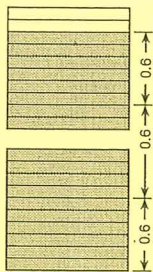
Name _____ Date _____ Class _____

0.7

SKILL 15: Dividing a Decimal by a Whole Number

The model shows that if you divide 1.8 into 3 equal parts, each part is 0.6.

0.6 ← quotient
3 | 1.8
divisor → dividend



To divide a decimal by a whole number, first put the decimal point in the quotient directly above the decimal point in the dividend. Then divide as if you were dividing whole numbers.

Example

Divide: $10.8 \div 4$.

Put the decimal point in the quotient.

Divide 10 by 4. Write the quotient above the 0. Bring down the 8.

$$\begin{array}{r} 2.7 \\ 4 \overline{)10.8} \\ \underline{8} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

$$10.8 \div 4 = 2.7$$

Guided Practice

Find each quotient. Remember to put the decimal point in the quotient.

$$\begin{array}{r} 5.2 \overline{)15.4} \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

1. $8 \overline{)42.0}$

$$\begin{array}{r} 2.7 \overline{)10.8} \\ \underline{54} \\ 54 \\ \underline{54} \\ 0 \end{array}$$

2. $4 \overline{)87.2}$

$$\begin{array}{r} 2.1 \overline{)8.4} \\ \underline{42} \\ 42 \\ \underline{42} \\ 0 \end{array}$$

3. $12 \overline{)1.72}$

$$\begin{array}{r} 0.14 \overline{)1.68} \\ \underline{12} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

Section C: Dividing Decimals

Decimals 33

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SKILL 15: Practice

Divide. Continue dividing until the remainder is 0.

$$\begin{array}{r} 1.37 \\ 1.5 \overline{)6.85} \end{array}$$

$$\begin{array}{r} 4.56 \\ 2.3 \overline{)13.68} \end{array}$$

$$\begin{array}{r} 6.5 \\ 4.8 \overline{)52} \end{array}$$

$$\begin{array}{r} 5.13 \\ 3 \overline{)15.39} \end{array}$$

$$\begin{array}{r} 67.4 \\ 6 \overline{)404.4} \end{array}$$

$$\begin{array}{r} 4.75 \\ 8 \overline{)28.5} \end{array}$$

$$\begin{array}{r} 0.75 \\ 40 \overline{)30} \end{array}$$

$$\begin{array}{r} 4.11 \\ 10 \overline{)161.65} \end{array}$$

$$\begin{array}{r} 3.7 \\ 12 \overline{)65240.5} \end{array}$$

$$13. 109.5 \div 75 = \underline{1.46}$$

$$14. 127.35 \div 45 = \underline{2.83}$$

$$15. 26.45 \div 23 = \underline{1.15}$$

$$16. 42.5 \div 25 = \underline{1.7}$$

$$17. 79.1 \div 14 = \underline{5.65}$$

$$18. 9.6417 \div 3 = \underline{3.2139}$$

Solve.

19. A 5-pound beef roast costs \$9.45. What is the price per pound?

$$\underline{\$1.89}$$

20. Sliced turkey costs \$4 per pound. How many pounds do you get for \$16.20?

$$\underline{4.05 \text{ lb}}$$

WEST PAPER

21. Find the quotient: $6.52 \div 4$.

- A 1.13 B 16.3 C 1.63 D 163

22. Add: $0.73 + 4 + 2.8$.

- F 6.53 G 7.53 H 1.05 J 4.91

Skill 6

34 Decimals

Section C: Dividing Decimals

SKILL 16:

Writing Zeros in the Quotient

Student pages 35-36

Name _____ Date _____ Class _____



SKILL 16: Writing Zeros in the Quotient

Sometimes when you divide a decimal by a whole number, you have to write zeros in the quotient before you can start to divide.

Example

Divide: $1.475 \div 25$.

Put the decimal point in the quotient.

There are no 25s in 1. Write 0 above the 1.

Now divide.

$$\begin{array}{r} 0.059 \\ 25 \overline{) 1.475} \\ \underline{25} \\ 125 \\ \underline{125} \\ 0 \end{array}$$

$$1.475 \div 25 = 0.059$$

Guided Practice

Find each quotient.

$$1. \begin{array}{r} 0.09 \\ 5 \overline{) 0.45} \\ \underline{45} \\ 0 \end{array}$$

$$2. \begin{array}{r} 0.008 \\ 67 \overline{) 0.536} \\ \underline{536} \\ 0 \end{array}$$

$$3. \begin{array}{r} 0.004 \\ 92 \overline{) 0.368} \\ \underline{368} \\ 0 \end{array}$$

$$4. \begin{array}{r} 0.0052 \\ 4 \overline{) 0.208} \\ \underline{20} \\ 8 \\ \underline{8} \\ 0 \end{array}$$

$$5. \begin{array}{r} 2.0042 \\ 6 \overline{) 12.024} \\ \underline{12} \\ 0 \\ \underline{0} \\ 2 \\ \underline{2} \\ 0 \end{array}$$

$$6. \begin{array}{r} 0.4001 \\ 24 \overline{) 9.6024} \\ \underline{96} \\ 0 \\ \underline{0} \\ 2 \\ \underline{2} \\ 4 \\ \underline{4} \\ 0 \end{array}$$

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Name _____

Date _____

Class _____

SKILL 16: Practice

Find each quotient.

$$\begin{array}{l} 0.07 \\ 1. \end{array} \begin{array}{l} 0.08 \\ 2. \end{array} \begin{array}{l} 3.009 \\ 3. \end{array} \begin{array}{l} 11.008 \\ 4. \end{array}$$

$$\begin{array}{l} 0.016 \\ 5. \end{array} \begin{array}{l} 3.205 \\ 6. \end{array} \begin{array}{l} 3.02 \\ 7. \end{array} \begin{array}{l} 2.05 \\ 8. \end{array}$$

$$\begin{array}{l} 0.037 \\ 9. \end{array} \begin{array}{l} 0.0041 \\ 10. \end{array} \begin{array}{l} 0.006 \\ 11. \end{array} \begin{array}{l} 0.086 \\ 12. \end{array}$$

$$13. 1.275 \div 75 = \underline{0.017}$$

$$14. 3.35 \div 50 = \underline{0.067}$$

$$15. 0.0135 \div 15 = \underline{0.0009}$$

$$16. 18.585 \div 9 = \underline{2.065}$$

Solve.

17. A 10.5-inch sausage is cut into 150 slices of the same size. Is each slice greater than or less than 0.1 inch thick?

Less than

18. A stack of 250 sheets of bakery tissue paper is about 2.5 inches high. About how thick is each piece of tissue paper?

0.01 in.



19. Divide: $0.054 \div 9$.

- A 0.6
B 8
C 0.006
D 0.06

Skill 16

20. Multiply: 0.046×10 .

- F 0.46
G 4.6
H 0.046
J 460

Skill 10

SKILL 17:

Dividing a Decimal by 10, 100, or 1,000

Student pages 37-38

Name _____ Date _____ Class _____



SKILL 17: Dividing a Decimal by 10, 100, or 1,000

Notice how the quotient decreases and the decimal point moves when you divide by 10, 100, or 1,000.

$$\begin{aligned} 372 \div 10 &= 37.2 & 6.2 \div 10 &= 0.62 & 0.4 \div 10 &= 0.04 \\ 372 \div 100 &= 3.72 & 6.2 \div 100 &= 0.062 & 0.4 \div 100 &= 0.004 \\ 372 \div 1,000 &= 0.372 & 6.2 \div 1,000 &= 0.0062 & 0.4 \div 1,000 &= 0.0004 \end{aligned}$$

To divide a number by 10, 100, or 1,000, move the decimal point one place to the left for each zero in 10, 100, or 1,000. Sometimes you will need to annex zeros to show the quotient.

Example

Divide 43.6 by 10, 100, and 1,000.

$$\begin{aligned} 43.6 \div 10 &= 4.36 & 43.6 \div 100 &= 0.436 & 43.6 \div 1,000 &= 0.0436 \\ 10 \text{ has one zero.} & & 100 \text{ has two zeros.} & & 1,000 \text{ has three zeros.} & \\ \text{Move the decimal} & & \text{Move the decimal} & & \text{Move the decimal} & \\ \text{point one place} & & \text{point two places} & & \text{the decimal point three places} & \\ \text{to the left.} & & \text{to the left.} & & \text{to the left. To do so, annex} & \\ & & & & \text{a zero to the left of the 4.} & \end{aligned}$$

Guided Practice

Place the decimal point in the product.
Annex extra zeros if necessary.

$$\begin{aligned} 1. 48.1 \div 10 &= 4.81 & 2. 48.1 \div 100 &= 0.481 & 3. 48.1 \div 1,000 &= 0.0481 \\ 4. 278 \div 10 &= 27.8 & 5. 278 \div 100 &= 2.78 & 6. 278 \div 1,000 &= 0.278 \\ 7. 0.9 \div 10 &= 0.09 & 8. 0.9 \div 100 &= 0.009 & 9. 0.9 \div 1,000 &= 0.0009 \end{aligned}$$

Divide.

$$\begin{aligned} 10. 0.21 \div 10 &= 0.021 & 11. 82.4 \div 1,000 &= 0.0824 \\ 12. 22.4 \div 100 &= 0.224 & 13. 813.6 \div 10 &= 81.36 \\ 14. 212 \div 1,000 &= 0.212 & 15. 5 \div 100 &= 0.05 \\ 16. 10 \div 1,000 &= 0.01 & 17. 0.1 \div 1,000 &= 0.0001 \end{aligned}$$

Section C: Dividing Decimals

Decimals 37

Name _____ Date _____ Class _____

SKILL 17: Practice

Divide.

$$\begin{aligned} 1. 40.5 \div 100 &= 0.405 & 2. 25 \div 1,000 &= 0.025 \\ 3. 7.03 \div 100 &= 0.0703 & 4. 0.03 \div 10 &= 0.003 \\ 5. 983 \div 100 &= 9.83 & 6. 809 \div 1,000 &= 0.809 \\ 7. 4,518 \div 100 &= 45.18 & 8. 74.41 \div 10 &= 7.441 \\ 9. 88.56 \div 10 &= 8.856 & 10. 0.009 \div 10 &= 0.0009 \\ 11. 0.75 \div 100 &= 0.0075 & 12. 0.57 \div 100 &= 0.0057 \\ 13. 7.3 \div 1,000 &= 0.0073 & 14. 18,693 \div 100 &= 186.93 \\ 15. 2.3 \div 100 &= 0.023 & 16. 320.1 \div 1,000 &= 0.3201 \\ 17. 0.04 \div 100 &= 0.0004 & 18. 58.3 \div 1,000 &= 0.0583 \\ 19. 752.1 \div 10 &= 75.21 & 20. 0.659 \div 100 &= 0.00659 \\ 21. 657 \div 10 &= 65.7 & 22. 0.03 \div 1,000 &= 0.00003 \\ 23. 502.3 \div 100 &= 5.023 & 24. 2,385 \div 1,000 &= 2.385 \\ 25. 4.9 \div 10 &= 0.49 & 26. 0.8 \div 100 &= 0.008 \end{aligned}$$

Solve.

Mrs. Hanna paid a total of \$59.00 for 10 identical strands of lights to use for a party. The 10 strands contained 1,000 lights in all.

$$\begin{aligned} 27. \text{ How much did each strand of lights cost? } & \underline{\$5.90} \\ 28. \text{ How much did each light cost? } & \underline{\$0.059} \end{aligned}$$



$$29. \text{ Divide: } 2.67 \div 100.$$

- A 0.00267 C 0.0267
B 0.267 D 267

Skill 17

30. Estimate: 3.95×46.8 . Round to make the computation easy.

- F 200 H 250
G 120 J 138

Skill 11

38 Decimals

Section C: Dividing Decimals

SKILL 18:

PROBLEM SOLVING: Finding Averages

Student pages 39-40

Name _____ Date _____ Class _____



SKILL 18: PROBLEM SOLVING: Finding Averages

To find the average of a set of numbers, first find the sum of the numbers. Then divide by the number of addends.

Example

The table shows the approximate duration of the final 5 Apollo space missions. What was the average duration of those missions?

Read The table shows the duration of the final 5 Apollo missions.

Plan How do you find the average?
Add to find the total duration of the 5 missions.
Divide this sum by 5 to find the average.

APOLLO SPACE MISSIONS	
Apollo 13	6.0 days
Apollo 14	9.0 days
Apollo 15	12.3 days
Apollo 16	11.1 days
Apollo 17	12.6 days

Solve Add: $6.0 + 9.0 + 12.3 + 11.1 + 12.6 = 51.0$.

Then divide.

The average duration of these missions was 10.2 days.

Look Back The average should be between the least and greatest addend. Since 10.2 is between 6.0 and 12.6, the answer makes sense.

$$\begin{array}{r} 10.2 \\ 5 \overline{)51.0} \\ \underline{50} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

Guided Practice

Shawn's math test grades for the marking period were 93, 85, 87, 67, 92, and 83. Find his average grade.

- What is the sum of the grades? 507
- How many grades are there? 6
- How do you find the average grade? Divide 507 by 6.
- What is the average grade? 84.5

- Is the average between the least and greatest addend? Yes
Does the answer make sense? Yes
- Suppose Shawn's teacher throws out the lowest test grade. Find Shawn's average grade based on his five highest grades. 88

Section C: Dividing Decimals

Decimals 39

Name _____ Date _____ Class _____

SKILL 18: Practice

Find the average of each set of numbers.

- 1.6, 2.3, 2.3, 3.8, 2.0 2.4
- 0.33, 0.25, 0.26, 0.32 0.29

Solve each problem.

- The number of students in each homeroom at Lincoln School is 37, 41, 34, 38, 33, and 36. What is the average number of students in each room? 36.5 students
- The normal monthly precipitation in Baltimore, given in inches, is shown below.
3.1, 3.1, 3.4, 3.1, 3.7, 3.7, 3.7, 3.9, 3.4, 3.0, 3.3, 3.4
Find the average monthly precipitation. 3.4 in.
- Shelly's times, in seconds, for the 100-meter dash were 21.2, 19.8, 22.1, 20.0, and 20.4. What is her average time? 20.7 seconds
- Larry bought CDs for \$12.98, \$15.39, and \$8.95. What was the total amount he paid for the CDs? \$37.32
- Ms. Kelstat bought milk four times last week. She paid the following for each gallon: \$3.79, \$3.53, \$2.09 (on sale), \$3.79. What was the average price per gallon? \$3.30
- Jamie took five tests and had an average score of 95.4. How many total points did she earn? 477 points



- Rosita's bowling scores were 129, 144, 137, and 148. Find her average score. Skill 18
A 558 C 139.5
B 114 D 456
- At 55 miles per hour, how far will Mr. Murray travel in 2.5 hours? Skill 9
F 1,375 mi H 57.5 mi
G 13.75 mi J 137.5 mi

Section C: Dividing Decimals

Decimals 40

SKILL 19: Estimating Quotients

Student pages 41-42

Name _____ Date _____ Class _____



SKILL 19: Estimating Quotients

To estimate a quotient, choose numbers close to the dividend and the divisor that are easy to divide.

Example 1

Estimate: $25.2 \div 6.4$

$$\begin{array}{r} 25.2 \div 6.4 \\ \downarrow \end{array}$$

Look at the divisor first. 6.4 is close to 6. 24 is a number close to 25.2 that is easy to divide by 6.

$$24 \div 6 = 4$$

An estimated quotient is 4.

Example 2

Estimate: $189.44 \div 26$

$$\begin{array}{r} 189.44 \div 26 \\ \downarrow \\ 200 \div 25 = 8 \end{array}$$

An estimated quotient is 8.

Guided Practice

Estimate each quotient. Accept all reasonable estimates.

$$1. 154.1 \div 46.9$$

$$\begin{array}{r} 150 \div 50 = 3 \\ \downarrow \end{array}$$

$$2. 57.9 \div 8$$

$$\begin{array}{r} 56 \div 8 = 7 \\ \downarrow \end{array}$$

$$3. 9.16 \div 5.2$$

$$\begin{array}{r} 10 \div 5 = 2 \\ \downarrow \end{array}$$

Estimate each quotient. Show what numbers you used.

$$4. 35.9 \div 8.7$$

$$\begin{array}{r} 36 \div 9 = 4 \\ \downarrow \end{array}$$

$$5. 392.7 \div 4.2$$

$$\begin{array}{r} 400 \div 4 = 100 \\ \downarrow \end{array}$$

$$6. 23.8 \div 8$$

$$\begin{array}{r} 24 \div 8 = 3 \\ \downarrow \end{array}$$

$$7. 46.2 \div 9$$

$$\begin{array}{r} 45 \div 9 = 5 \\ \downarrow \end{array}$$

$$8. 486.1 \div 24.9$$

$$\begin{array}{r} 500 \div 25 = 20 \\ \downarrow \end{array}$$

$$9. 17.1 \div 3.2$$

$$\begin{array}{r} 18 \div 3 = 6 \\ \downarrow \end{array}$$

$$10. 53.1 \div 5.9$$

$$\begin{array}{r} 54 \div 6 = 9 \\ \downarrow \end{array}$$

$$11. 62 \div 9.8$$

$$\begin{array}{r} 60 \div 10 = 6 \\ \downarrow \end{array}$$

$$12. 50 \div 7.1$$

$$\begin{array}{r} 49 \div 7 = 7 \\ \downarrow \end{array}$$

Section C: Dividing Decimals

Decimals 41

Name _____ Date _____ Class _____

SKILL 19: Practice

Estimate each quotient. Accept all reasonable estimates.

$$1. 37.16 \div 8.7$$

$$4$$

$$2. 121.7 \div 2.9$$

$$40$$

$$3. 14.6 \div 6.8$$

$$2$$

$$4. 80.1 \div 4$$

$$20$$

$$5. 515.3 \div 56$$

$$10$$

$$6. 106.9 \div 0.95$$

$$100$$

$$7. 245.6 \div 59$$

$$4$$

$$8. 16.42 \div 8$$

$$2$$

$$9. 76.7 \div 25$$

$$3$$

$$10. 271.3 \div 9.03$$

$$30$$

$$11. 798.6 \div 38.5$$

$$20$$

$$12. 42.8 \div 6.7$$

$$6$$

$$13. 13.86 \div 2.3$$

$$7$$

$$14. 62.1 \div 5.8$$

$$10$$

$$15. 608.7 \div 19$$

$$30$$

$$16. 36.1 \div 12.2$$

$$3$$

Use estimation to solve.

17. Lynne bought 12 golf balls for \$14.98. Did each golf ball cost more than or less than \$1.00?

More than \$1.00

18. The track team paid \$179.50 for 9 sweatshirts. About how much did each sweatshirt cost?

About \$20

19. The soccer coach bought 5 packages of socks for \$46.25.

Each package contained 3 pairs of socks. If he sells the socks to his players for \$3.00 a pair, will he lose money? Explain.

Yes, he paid more than \$3 per pair.



20. Estimate: $34.6 \div 7$.

$$\textcircled{C} 5$$

21. Subtract: $19.7 - 1.74$.

$$\textcircled{C} 17.96$$

Skill 19

Skill 7

A 50

F 0.23

H 2.3

J 18.06

B 0.5

D 4

Section C: Dividing Decimals

Decimals 42

SKILL 20:

Dividing a Whole Number by a Decimal

Student pages 43-44

Name _____ Date _____ Class _____



SKILL 20: Dividing a Whole Number by a Decimal

As illustrated below, you can multiply the dividend and divisor by the same nonzero number without changing the quotient.

$$\begin{array}{l} 6 \div 3 = 2 \\ 60 \div 30 = 2 \\ 6 \times 10 \quad 3 \times 10 \end{array} \quad \begin{array}{l} 15 \div 5 = 3 \\ 1,500 \div 500 = 3 \\ 15 \times 100 \quad 5 \times 100 \end{array} \quad \begin{array}{l} 0.46 \div 2 = 0.23 \\ 46 \div 200 = 0.23 \\ 0.46 \times 100 \quad 2 \times 100 \end{array}$$

To divide by a decimal, multiply both the dividend and the divisor by 10, 100, or 1,000 so that the divisor is a whole number. Then put the decimal point in the quotient and divide.

Example

Divide: $63 \div 7.5$.

Multiply the dividend and divisor by 10 so the divisor is a whole number.

$$\begin{array}{r} 75 \overline{) 630} \\ 75 \overline{) 630} \\ \hline 0 \end{array}$$

$63 \div 7.5 = 8.4$

Put the decimal point in the quotient.

Divide.

$$\begin{array}{r} 8.4 \\ 75 \overline{) 630.0} \\ \hline 0 \end{array}$$

Annex a zero. Divide until the remainder is zero.

Guided Practice

Place the decimal point correctly in the quotient.

1. $0.6 \overline{) 2.0}$ 2. $0.5 \overline{) 66.0}$ 3. $2.5 \overline{) 16.0}$ 4. $0.48 \overline{) 36.00}$

Divide.

5. $0.6 \overline{) 51}$ 6. $0.4 \overline{) 7}$ 7. $2.9 \overline{) 435}$ 8. $0.15 \overline{) 126}$

Section C: Dividing Decimals

Decimals 43

Name _____ Date _____ Class _____

SKILL 20: Practice

Divide.

1. $0.6 \overline{) 87}$ 2. $0.06 \overline{) 87}$ 3. $0.3 \overline{) 9}$ 4. $0.03 \overline{) 9}$

5. $0.2 \overline{) 57}$ 6. $0.8 \overline{) 10}$ 7. $0.09 \overline{) 18}$ 8. $0.04 \overline{) 13}$

9. $0.24 \overline{) 168}$ 10. $1.2 \overline{) 15}$ 11. $0.6 \overline{) 61}$ 12. $0.35 \overline{) 98}$

13. $771 \div 0.12$ 14. $861 \div 8.4$ 15. $364 \div 0.56$

16. $75 \div 0.025$ 17. How many \$33 stamps can you buy for \$33?

Solve. Refer to the table.

100 stamps

40 stamps

Postal Rates for Letters	
1 ounce or less	\$.33
Each additional ounce	\$.22

19. a. What is the cost to mail a 3-ounce letter? b. How many 3-ounce letters can you mail for \$8?

10 letters



20. Divide: $162 \div 2.7$.

- A 600 B 0.6 C 6 D 60

Skill 20

21. Find the average: 6.7, 3, 8.6.

- F 3 G 6.1 H 18.3 J 5.2

44 Decimals

Section C: Dividing Decimals

SKILL 21:

Dividing a Decimal by a Decimal

Student pages 45-46

Name _____

Date _____

Class _____

0.7 SKILL 21: Dividing a Decimal by a Decimal

Remember that to divide by a decimal, multiply both the dividend and the divisor by 10, 100, or 1,000 so that the divisor is a whole number. Write the decimal point in the quotient and divide.

Example

$$\text{Divide: } 0.24 \div 3.2$$

Multiply 3.2 and 0.24 by 10 so the divisor is a whole number.

Put the decimal point in the quotient.

There are no 32s in 2 or in 24. Write 0s in the quotient.

Annex zeros and continue dividing.

$$3.2 \overline{)0.24}$$

$$32 \overline{)0.24}$$

$$32 \overline{)0.2400}$$

$$224$$

$$160$$

$$160$$

$$0$$

$$0.24 \div 3.2 = 0.075$$

Guided Practice

Place the decimal point correctly in each quotient.

$$1.3 \overline{)0.078}$$

$$2. 0.25 \overline{)4.25}$$

$$3. 0.85 \overline{)7.055}$$

$$4. 3.7 \overline{)1.036}$$

$$5. 1.8 \overline{)8.28}$$

$$6. 0.63 \overline{)0.6678}$$

$$7. 0.04 \overline{)0.916}$$

$$8. 0.125 \overline{)9.875}$$

Divide.

$$9. 0.19 \overline{)0.095}$$

$$10. 0.9 \overline{)1.08}$$

$$11. 0.28 \overline{)0.476}$$

$$12. 0.7 \overline{)0.0434}$$

$$13. 0.062 \overline{)0.0434}$$

Section C: Dividing Decimals

Decimals 45

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Class _____

SKILL 21: Practice

Divide.

$$1. 0.7 \overline{)6.3}$$

$$2. 0.9 \overline{)0.18}$$

$$3. 0.6 \overline{)0.48}$$

$$4. 0.8 \overline{)1.12}$$

$$5. 0.16 \overline{)2.56}$$

$$6. 0.36 \overline{)0.288}$$

$$7. 0.08 \overline{)1.8}$$

$$8. 1.4 \overline{)13.86}$$

$$9. 1.7 \overline{)10.54}$$

$$10. 2.4 \overline{)0.168}$$

$$11. 0.07 \overline{)0.035}$$

$$12. 0.96 \overline{)0.0192}$$

$$13. 0.35 \div 0.07 = \underline{5}$$

$$14. 0.2068 \div 4.4 = \underline{0.047}$$

$$15. 0.015 \div 0.05 = \underline{0.3}$$

$$16. 13.76 \div 3.2 = \underline{4.3}$$

$$17. 0.441 \div 6.3 = \underline{0.07}$$

$$18. 0.0602 \div 0.086 = \underline{0.7}$$

Solve.

19. Teri paid \$3.06 for apples that cost \$0.68 a pound. How many pounds of apples did she buy?

$$\underline{4.5 \text{ lb}}$$

20. Lin bought 9.2 gallons of gasoline for \$12.42 and paid for it with a \$20 bill. What was the price of one gallon of gasoline?

$$\underline{\$1.35}$$

21. Mr. Smith drove 381.9 miles in 8.5 hours. What was the average number of miles he drove each hour? Round your answer to the nearest tenth of a mile.

$$\underline{44.9 \text{ mi}}$$



22. Divide: $0.288 \div 9.6$.

Skill 21

- A 0.003
B 3
C 0.3
D 0.03

23. Find the product: 0.35×0.16 .

Skill 13

- F 0.056
G 0.530
H 0.56
J 5.60

46 Decimals

Section C: Dividing Decimals