Name _____ Date _____ Class _____

LESSON 3-3

Practice B

Adding and Subtracting Decimals

Find each sum or difference.

1. 8.9 + 2.4 _____

2. 12.7 − 9.6 _____

3. 18.35 − 4.16 _____

4. 7.21 + 11.6 _____

5. 0.975 + 3.8 _____

6. 20.66 − 9.1 _____

7. Tiffany's job requires a lot of driving. How many miles did she travel during the month of February? _____

Miles Tiffany Traveled

Week	1	2	3	4
Miles	210.05	195.18	150.25	165.30

8. Shelly babysits after school and on the weekends. How much did she earn in all for the month of April? _____

Shelly's Earnings for April

Week	1	2	3	4
Earnings	$120.50	$180.75	$205.25	$215.50

Evaluate 5.6 − *a* for each value of *a*.

9. $a = 3.7$ _____

10. $a = 0.5$ _____

11. $a = 2.8$ _____

12. $a = 1.42$ _____

13. $a = 0.16$ _____

14. $a = 3.75$ _____

15. Allen bought a box of envelopes for $2.79 and a pack of paper for $4.50. He paid with a $10 bill. How much change should be receive?

_____

16. From a bolt of cloth measuring 25.60 yards, Tina cut a 6.8-yard piece and an 11.9-yard piece. How much material is left on the bolt?

_____

Name _____ Date _____ Class _____

LESSON 3-4

Practice B

Decimals and Metric Measurement

Multiply or divide.

1. 7.5 • 100

_____

2. 24.68 ÷ 10

_____

3. 1.479 • 1,000

_____

4. 316.2 ÷ 10^3

_____

5. 0.69 • 10^4

_____

6. 5.403 ÷ 10^2

_____

Use the abbreviation for the most appropriate metric unit.

7. A large thermos holds about 1.5 _____.

8. A computer screen is about 30.75 _____ wide.

9. A beetle weighs about 0.68 _____.

10. The distance from Dallas, Texas, to Denver, Colorado is 1,260 _____.

Convert each measure.

11. 50 cm = _____ mm

12. 3.6 L = _____ mL

13. 6.5 kg = _____ g

14. 0.9 km = _____ m

15. 1.42 m = _____ cm

16. 12.85 mL = _____ L

17. An official hockey puck can weigh no more than 170 grams. What is the puck's maximum weight in kilograms?

_____

18. An official hockey puck is 2.54 centimeters thick. What is the official thickness of a hockey puck in millimeters?

_____

19. An official hockey goal is 46.45 meters tall. What is the height of a hockey goal in centimeters?

_____

20. Hockey pucks can be hit at speeds of up to 190 kilometers per hour! How many meters per hour is that?

_____

Name _____ Date _____ Class _____

LESSON 3-6

Practice B

Multiplying Decimals

Find each product.

1. 0.7 × 0.3

2. 0.05 × 0.4

3. 8.0 × 0.02

4. 3.5 × 0.2

5. 12.1 × 0.01

6. 9.0 × 0.9

7. 0.04 • 0.58

8. 2.15 • 1.5

9. 1.73 • 0.8

10. 6.017 • 2.0

11. 3.96 • 0.4

12. 0.7 • 0.009

Evaluate $8x$ for each value of x.

13. $x = 0.5$

14. $x = 2.3$

15. $x = 0.74$

16. $x = 3.12$

17. $x = 0.587$

18. $x = 14.08$

19. The average mail carrier walks 4.8 kilometers in a workday. How far do most mail carriers walk in a 6-day week? There are 27 working days in July, so how far will a mail carrier walk in July?

20. A deli charges $3.45 for a pound of turkey. If Tim wants to purchase 2.4 pounds, how much will it cost?

Name _____ Date _____ Class _____

LESSON 3-7

Practice B

Dividing Decimals by Whole Numbers

Find each quotient.

1. 0.81 ÷ 9 _____

2. 1.84 ÷ 4 _____

3. 7.2 ÷ 6 _____

4. 13.6 ÷ 8 _____

5. 4.55 ÷ 5 _____

6. 29.6 ÷ 8 _____

7. 15.57 ÷ 9 _____

8. 0.144 ÷ 12 _____

9. 97.5 ÷ 3 _____

10. 0.0025 ÷ 5 _____

11. 2.84 ÷ 8 _____

12. 18.9 ÷ 3 _____

Evaluate the expression 2.094 ÷ *x* for the given value of *x*.

13. $x = 2$ _____

14. $x = 4$ _____

15. $x = 12$ _____

16. $x = 20$ _____

17. $x = 15$ _____

18. $x = 30$ _____

19. There are three grizzly bears in the city zoo. Yogi weighs 400.5 pounds, Winnie weighs 560.35 pounds, and Nyla weighs 618.29 pounds. What is the average weight of the three bears?

_____

20. The bill for dinner came to $75.48. The four friends decided to leave a $15.00 tip. If they shared the bill equally, how much will they each pay?

_____

Name _____ Date _____ Class _____

LESSON 3-8

Practice B

Dividing by Decimals

Find each quotient.

1. 9.0 ÷ 0.9

_____

2. 29.6 ÷ 3.7

_____

3. 10.81 ÷ 2.3

_____

4. 10.5 ÷ 1.5

_____

5. 15.36 ÷ 4.8

_____

6. 9.75 ÷ 1.3

_____

7. 20.4 ÷ 5.1

_____

8. 37.5 ÷ 2.5

_____

9. 9.24 ÷ 1.1

_____

10. 16.56 ÷ 6.9

_____

11. 28.9 ÷ 8.5

_____

12. 14.35 ÷ 0.7

_____

Evaluate the expression $x \div 1.2$ for the given value of x.

13. $x = 40.8$

_____

14. $x = 1.8$

_____

15. $x = 10.8$

_____

16. $x = 14.4$

_____

17. $x = 4.32$

_____

18. $x = 0.06$

_____

19. Anna is saving $6.35 a week to buy a computer game that costs $57.15. How many weeks will she have to save to buy the game?

_____

20. Ben ran a 19.5-mile race last Saturday. His average speed during the race was 7.8 miles per hour. How long did it take Ben to finish the race?

_____

Scientific Notation
Class Lesson

Name
Date

Multiplying Decimals by 10, 100, 1000 (use the calculator to find answers on this set)

122.1 x 1000 =
0.62 x 100 =
1.9 x 1000 =
8.1 x 100 =
0.725 x 100 =
821.9 x 1000 =

8.8 x 10 =
0.27 x 1000 =
9.876 x 100 =
0.002 x 100 =
0.085 x 10 =
0.056 x 10 =

0.677 x 1000 =
0.6 x 100 =
0.265 x 100 =
0.001 x 100 =
0.6 x 10 =
96.08 x 1000 =

Compare what happens to the decimal point in the original number to the decimal point in the answer.

_____

Write the following numbers in exponential form (example: 1,000 = 10 to the 3rd power)

1000 =
100 =
1000 =
100 =
100 =
1000 =

10 =
1000 =
100 =
100 =
10 =
10 =

1000 =
100 =
100 =
100 =
10 =
1000 =

What do you notice about the number of zeros compared to the exponent? _____

_____

Now combine the two things you have done: (no calculators)

122.1×10^3 - means you are taking 122.1 X 1000 - so you move the decimal 3 places to the right
8.8×10^1 - means you are taking 8.8 X 10 - so you move the decimal 1 place to the right
0.677×10^3 - means you are taking 0.677 X 1000 – so you move the decimal 3 places to the right

$0.62 \times 10^2 =$
$1.9 \times 10^2 =$
$8.1 \times 10^2 =$
$0.725 \times 10^3 =$
$821.9 \times 10^1 =$

$0.27 \times 10^1 =$
$9.876 \times 10^3 =$
$0.002 \times 10^3 =$
$0.085 \times 10^3 =$
$0.056 \times 10^2 =$

$0.6 \times 10^2 =$
$0.265 \times 10^3 =$
$0.001 \times 10^1 =$
$0.6 \times 10^1 =$
$96.08 \times 10^2 =$

What do you think would happen to the decimal if you were **dividing** by a power of 10?

$125.89 \div 10^1 =$
$45.88 \div 10^2 =$

$888.254 \div 10^2 =$
$4{,}567 \div 10^3 =$

$875 \div 10^3 =$
$3{,}248.6 \div 10^1 =$

Scientific Notation
Class Lesson

Name
Date

Find the following answers using what you have learned about Scientific Notation

1. $0.86 \times 10^{2} =$
2. $0.897 \times 10^{1} =$
3. $0.6 \times 10^{3} =$
4. $31.9 \times 10^{2} =$
5. $8.78 \times 10^{3} =$
6. $61.8 \times 10^{1} =$
7. $15.63 \times 10^{1} =$
8. $0.53 \times 10^{2} =$
9. $2.5 \times 10^{3} =$
10. $98 \times 10^{3} =$
11. $0.09 \times 10^{2} =$
12. $2.737 \times 10^{1} =$
13. $0.088 \times 10^{2} =$
14. $0.02 \times 10^{3} =$
15. $0.001 \times 10^{1} =$
16. $0.96 \times 10^{3} =$
17. $62.58 \times 10^{1} =$
18. $0.9 \times 10^{2} =$
19. $453.7 \times 10^{1} =$
20. $0.31 \times 10^{2} =$
21. $0.834 \times 10^{3} =$
22. $0.5 \times 10^{2} =$
23. $9.33 \times 10^{3} =$
24. $1.4 \times 10^{1} =$

25. $894.56 \div 10^{2} =$
26. $839.7 \div 10^{3} =$
27. $345.6 \div 10^{1} =$
28. $3{,}499 \div 10^{3} =$
29. $12.45 \div 10^{2} =$
28. $87.4 \div 10^{1} =$
31. $767 \div 10^{1} =$
32. $789.3 \div 10^{1} =$
33. $0.45 \div 10^{2} =$

Name _____ Date _____ Class _____

LESSON 3-4

Problem Solving

Decimals and Metric Measurement

Write the correct answer.

1. The St. Gotthard Tunnel in Switzerland is the world's longest tunnel. It is 16.3 kilometers long. What is the tunnel's length in meters?

_____

2. Ostriches are the world's heaviest birds. On average, they weigh 156,500 grams. How many kilograms does the average ostrich weigh?

_____

3. The huge flower of the titam arum plant of Sumatra only lives for one day. During that time it grows 75 millimeters. What is the flower's height in centimeters?

_____

4. The average male elephant drinks about 120,000 milliliters of water each day. How many liters of water do most male elephants drink each day?

_____

Circle the letter of the correct answer.

5. If you want to measure the length of a pencil, which metric unit would be best to use?
   - **A** meter
   - **B** kilometer
   - **C** centimeter
   - **D** inch

6. If you want to measure how much a refrigerator weighs, which metric unit would be best to use?
   - **F** kilogram
   - **G** liter
   - **H** pound
   - **J** gram

7. Tim measured how much water his eyedropper can hold. Which of the following could be the correct measurement?
   - **A** 2 liters
   - **B** 2 milliliters
   - **C** 2 grams
   - **D** 2 kilograms

8. Which of the following best describes the distance from New York City to Boston, Massachusetts?
   - **F** 330 meters
   - **G** 330 centimeters
   - **H** 330 kilometers
   - **J** 330 millimeters

Name _____ Date _____ Class _____

LESSON 3-6

Problem Solving

Multiplying Decimals

Use the table to answer the questions.

United States Minimum Wage

Year	Hourly Rate
1940	$0.30
1950	$0.75
1960	$1.00
1970	$1.60
1980	$3.10
1990	$3.80
2000	$5.15

1. At the minimum wage, how much did a person earn for a 40-hour workweek in 1950?

_____

2. At the minimum wage, how much did a person earn for working 25 hours in 1970?

_____

3. If you had a minimum-wage job in 1990, and worked 15 hours a week, how much would you have earned each week?

_____

4. About how many times higher was the minimum wage in 1960 than in 1940?

_____

5. Ted's grandfather had a minimum-wage job at his neighborhood bakery in 1940. He worked 40 hours a week for the entire year. How much did Ted's grandfather earn at the bakery in 1940?

_____

6. Companies pay minimum wage workers time-and-a-half for any hours worked over 40 per week. This means that the worker is paid their hourly wage plus half of that wage. If a person in 1960 worked 42 hours one week, how much did he or she earn?

_____

Circle the letter for the correct answer.

7. Having one dollar in 1960 is equivalent to having $5.82 today. If you worked 40 hours a week in 1960 at minimum wage, how much would your weekly earnings be worth today?

A $40.00

B $5.82

C $232.80

D $2,328.00

8. In 2000, Cindy had a part-time job at a florist, where she earned minimum wage. She worked 18 hours each week for the whole year. How much did she earn from this job in 2000?

F $927.00

G $4,820.40

H $10,712.00

J $2,142.40

Name _____ Date _____ Class _____

LESSON 3-9

Problem Solving

Interpret the Quotient

Write the correct answer.

1. Five friends split a pizza that costs $16.75. If they shared the bill equally, how much did they each pay?

_____

2. There are 45 choir members going to the recital. Each van can carry 8 people. How many vans are needed?

_____

3. Tara bought 150 beads. She needs 27 beads to make each necklace. How many necklaces can she make?

_____

4. Cat food costs $2.85 for five cans. Ben only wants to buy one can. How much will it cost?

_____

5. Tennis balls come in cans of 3. The coach needs 50 tennis balls for practice. How many cans should he order?

_____

6. The rainfall for three months was 4.6 inches, 3.5 inches, and 4.2 inches. What was the average monthly rainfall during that time?

_____

7. The students in Daniel's book club have to read a 28-page story. Daniel said he is going to read it in 6 different sittings. About how many pages will Daniel read during each sitting?

_____

8. The gas tank in Brian's car holds 10.5 gallons. His car averages 28.6 miles per gallon of gas. How many times will he have to fill up the gas tank to drive 1,000 miles?

_____

Circle the letter of the correct answer.

9. Tom has $15.86 to buy marbles that cost $1.25 each. He wants to know how many marbles he can buy. What should he do after he divides?

   A Drop the decimal part of the quotient when he divides.

   B Drop the decimal part of the dividend when he divides.

   C Round the quotient up to the next highest whole number to divide.

   D Use the entire quotient of his division as the answer.

10. Mei needs 135 hot dog rolls for the class picnic. The rolls come in packs of 10. She wants to know how many packs to buy. What should she do after she divides?

   F Drop the decimal part of the quotient when she divides.

   G Drop the decimal part of the dividend when she divides.

   H Round the quotient up to the next highest whole number.

   J Use the entire quotient of her division as the answer.

Name _____ Date _____ Class _____

Practice B

LESSON 3-10 Decimal Equations

Solve each equation. Check your answer.

1. $a - 2.7 = 4.8$

_____

2. $b \div 7 = 1.9$

_____

3. $w - 6.5 = 3.8$

_____

4. $p \div 0.4 = 1.7$

_____

5. $4.5 + x = 8$

_____

6. $b \div 3 = 2.5$

_____

7. $7.8 + s = 15.2$

_____

8. $1.63q = 9.78$

_____

9. $0.05 + x = 2.06$

_____

10. $1.7n = 2.38$

_____

11. $t - 6.08 = 12.59$

_____

12. $9q = 16.2$

_____

13. $w - 8.9 = 10.3$

_____

14. $1.4n = 3.22$

_____

15. $t - 12.7 = 0.8$

_____

16. $3.8 + a = 6.5$

_____

17. The distance around a square photograph is 12.8 centimeters. What is the length of each side of the photograph?

_____

18. You buy two rolls of film for $3.75 each. You pay with a $10 bill. How much change should you get back?

_____

Name _____ Date _____ Class _____

LESSON 3-3

Problem Solving

Adding and Subtracting Decimals

Use the table to answer the questions.

Busiest Ports in the United States

Port	Imports Per Year (millions of tons)	Exports Per Year (millions of tons)
South Louisiana, LA	30.6	57.42
Houston, TX	75.12	33.43
New York, NY & NJ	53.52	8.03
New Orleans, LA	26.38	21.73
Corpus Christi, TX	52.6	7.64

1. How many more tons of imports than exports does the Port of New Orleans handle each year?

_____

2. How many tons of imports and exports are shipped through the port of Houston, Texas, each year in all?

_____

3. Which port handles more exports than imports each year? How many more tons of exports does it handle?

_____

_____

4. Which two ports import the most goods each year? How many tons of imports do they ship altogether?

_____

_____

5. Which port ships 0.39 more tons of exports each year than the port at Corpus Christi, Texas?

_____

6. What is the difference between the imports and exports shipped in and out of Corpus Christi's port each year?

_____

Circle the letter of the correct answer.

7. What is the total amount of imports shipped into the nation's 5 busiest ports each year?

   A 238.22 million tons

   B 366.47 million tons

   C 128.25 million tons

   D 109.97 million tons

8. What is the total amount of exports shipped out of the nation's 5 busiest ports each year?

   F 366.47 million tons

   G 128.25 million tons

   H 109.97 million tons

   J 238.22 million tons

Name _____ Date _____ Class _____

LESSON 3-7 Problem Solving
Dividing Decimals by Whole Numbers

Write the correct answer.

1. Four friends had lunch together. The total bill for lunch came to $33.40, including tip. If they shared the bill equally, how much did they each pay?

_____

2. There are 7.2 milligrams of iron in a dozen eggs. Because there are 12 eggs in a dozen, how many milligrams of iron are in 1 egg?

_____

3. Kyle bought a sheet of lumber 8.7 feet long to build fence rails. He cut the strip into 3 equal pieces. How long is each piece?

_____

4. An albatross has a wingspan greater than the length of a car—3.7 meters! Wingspan is the length from the tip of one wing to the tip of the other wing. What is the length of each albatross wing (assuming wing goes from center of body)?

_____

5. The City Zoo feeds its three giant pandas 181.5 pounds of bamboo shoots every day. Each panda is fed the same amount of bamboo. How many pounds of bamboo does each panda eat every day?

_____

6. Emma bought 22.5 yards of cloth to make curtains for two windows in her apartment. She used the same amount of cloth on each window. How much cloth did she use to make each set of curtains?

_____

Circle the letter of the correct answer.

7. Aerobics classes cost $153.86 for 14 sessions. What is the fee for one session?

   A $10.99

   B $1.99

   C about $25.00

   D about $20.00

8. An entire apple pie has 36.8 grams of saturated fat. If the pie is cut into 8 slices, how many grams of saturated fat are in each slice?

   F 4.1 grams

   G 0.46 grams

   H 4.6 grams

   J 4.11 grams

Name _____ Date _____ Class _____

LESSON 3-8 Problem Solving
Dividing by Decimals

Write the correct answer.

1. Jamal spent $6.75 on wire to build a rabbit hutch. Wire costs $0.45 per foot. How many feet of wire did Jamal buy?

_____

2. Peter drove 195.3 miles in 3.5 hours. On average, how many miles per hour did he drive?

_____

3. Lisa's family drove 830.76 miles to visit her grandparents. Lisa calculated that they used 30.1 gallons of gas. How many miles per gallon did the car average?

_____

4. A chef bought 84.5 pounds of ground beef. He uses 0.5 pound of ground beef for each hamburger. How many hamburgers can he make?

_____

5. Mark earned $276.36 for working 23.5 hours last week. He earned the same amount of money for each hour that he worked. What is Mark's hourly rate of pay?

_____

6. Alicia wants to cover a section of her wall that is 2 feet wide and 12 feet long with mirrors. Each mirror tile is 2 feet wide and 1.5 feet long. How many mirror tiles does she need to cover that section?

_____

Circle the letter of the correct answer.

7. John ran the city marathon in 196.5 minutes. The marathon is 26.2 miles long. On average, how many miles per hour did John run the race?

   A 7 miles per hour

   B 6.2 miles per hour

   C 7.5 miles per hour

   D 5.5 miles per hour

8. Shaneeka is saving $5.75 of her allowance each week to buy a new camera that costs $51.75. How many weeks will she have to save to have enough money to buy it?

   F 9 weeks

   G 9.5 weeks

   H 8.1 weeks

   J 8 weeks

Name _____ Date _____ Class _____

LESSON 3-10

Problem Solving

Decimal Equations

Write the correct answer.

1. Bee hummingbirds weigh only 0.0056 ounces. They have to eat half their body weight every day to survive. How much food does a bee hummingbird have to eat each day?

_____

2. The desert locust, a type of grasshopper, can jump 10 times the length of its body. The locust is 1.956 inches long. How far can it jump in one leap?

_____

3. In 1900, there were about 1.49 million people living in California. In 2000, the population was 33.872 million. How much did the population grow between 1900 and 2000?

_____

4. Juanita has $567.89 in her checking account. After she deposited her paycheck and paid her rent of $450.00, she had $513.82 left in the account. How much was her paycheck?

_____

5. The average body temperature for people is 98.6°F. The average body temperature for most dogs is 3.4°F higher than for people. The average body temperature for cats is 0.5°F lower than for dogs. What is the normal body temperature for dogs and cats?

_____

6. Seattle, Washington, is famous for its rainy climate. Winter is the rainiest season there. From November through December the city gets an average of 5.85 inches of rain each month. Seattle usually gets 6 inches of rain in December. What is the city's average rainfall in November?

_____

Circle the letter of the correct answer.

7. The equation to convert from Celsius to Kelvin degrees is K = 273.16 + C. If it is 303.66°K outside, what is the temperature in Celsius degrees?

   A 576.82°C

   B 30.5°C

   C 305°C

   D 257.68°C

8. The distance around a square mirror is 6.8 feet. Which of the following equations finds the length of each side of the mirror?

   F $6.8 - x = 4$

   G $x \div 4 = 6.8$

   H $4x = 6.8$

   J $6.8 + 4 = x$