Decimals Worksheet 2

Division

Round the answers to 6 decimals.

1 a. $0.8 \overline{)\,131.7}$

1 b. $0.1 \overline{)\,33.007}$

2 a. $0.3 \overline{)\,388.3}$

2 b. $0.6 \overline{)\,434.56}$

3 a. $0.2 \overline{)\,370.916}$

3 b. $0.5 \overline{)\,8.46}$

Decimals Worksheet 3

Division

Round the answers to 6 decimals.

1 a. $0.6\overline{)1.28}$

1 b. $0.9\overline{)0.001}$

2 a. $0.7\overline{)7.56}$

2 b. $0.5\overline{)5.8}$

3 a. $0.4\overline{)4.1}$

3 b. $0.8\overline{)3.67}$

Name _____
Class Period _____
Date _____

S. O. L. 6.7
Class Practice Sheet

1. **A social studies book has 404 pages. If each chapter is about 39 pages, how many chapters are in the social studies book?**

A 10 chapters
B 11 chapters
C 12 chapters
D 13 chapters

2. **An auto mechanic tells John that labor is $47.00 per hour. If it takes the mechanic about $1\frac{1}{2}$ hours to fix John's car, about how much will the labor cost?**

A $60.00
B $75.00
C $90.00
D $95.00

3. **Sue is making a dress for a customer. She charges $20.25 an hour for labor. If it takes her $12\frac{1}{3}$ hours, about how much will the labor cost?**

A $120
B $240
C $360
D $420

4. **Jake makes $6.05 per hour. About how many hours does he need to work to make $250?**

A 30 hours
B 40 hours
C 50 hours
D 60 hours

5. **You are in charge of buying ice cream cones for the end of the year 6th grade party. There are 56 students in the 6th grade this year. You estimate that each person will eat 2 ice cream cones. If each box of cones has 12 cones, how many boxes should you buy?**

A 5
B 8
C 10
D 20

6. **At a museum gift shop, souvenir pencils were on sale at 2 for $0.59. Rueben wanted to buy 5 of these pencils. A reasonable estimate of the cost of 5 pencils, not including tax, is between:**

A $0.50 and $1.00
B $1.00 and $2.00
C $2.00 and $3.00
D $3.00 and $4.00

7. **For his office, Chuck ordered one package of black pens and one package of blue pens. Each package contained 188 pens. He also ordered 48 purple pens and 32 red pens. Which is the best estimate of the total number of pens Chuck ordered?**

A between 350 and 400
B between 400 and 450
C between 450 and 500
D between 500 and 550

8. **You are in charge of buying pizza for a class party. There are 30 students in your class. You estimate each person will eat two slices of pizza. There are eight slices per pizza. How many pizzas will you need?**

A 2
B 4
C 8
D 15

9. Jessica needs $4\frac{1}{4}$ yards of material to make each quilt. She has 32 yards of material to make quilts. If Jessica charges $26.50 for each quilt made from the 32 yards of material, what is the best estimate for how much money will she earn?

$75.00
$125.00
$175.00
$225.00

10. You went shopping with $20. You bought a notebook for $3.70, 3 pencils for 30¢ each, and a drink, fries, and burger for $2.20. Estimate the amount of money you had left.

A about $7
B about $13
C about $15
D about $18

SOL 6.7

Estimate to solve the problems.

1. Mr. Carr bought 19 gallon of paint. Each gallon of paint covers an area of about 350 square feet of wall space. About how many square feet will 19 gallon of paint cover?

_____

2. Katrina is making braided bracelets to sell at the fair. Each bracelet uses 3.2 feet of string. Katrina has 1,237 feet of string. About how many bracelets can she make if she uses all of the string?

_____

3. Denny bought 18 bags of dog food and 11 bags of cat food for the animal shelter. Each bag of food weighs 10 3/4lb. Estimate the total weight of all the bags.

_____

4. The table below shows the numbers of active pilots for 3 different years. No pilots were active for more than one of the given years.

PILOT CERTIFICATED HELD

YEAR	NUMBER
1970	720,028
1990	702,659
2001	622,274

What is a reasonable estimate for the total number of active pilots for the years 1970, 1990, and 2001?

_____

Name _____ Date _____ Class _____

LESSON 2-2

Problem Solving

Translate Between Words and Math

Write the correct answer.

1. Holly bought 10 comic books. She gave a few of them to Kyle. Let c represent the number of comic books she gave to Kyle. Write an expression for the number of comic books Holly has left.

_____

2. Last week, Peter worked 40 hours for $15 an hour. Write a numerical expression for the total amount Peter earned last week. Write an algebraic expression to show how much Peter earns in h hours at that rate.

_____

3. The temperature dropped 5°F, and then it went up 3°F. Let t represent the beginning temperature. Write an expression to show the ending temperature.

_____

4. Teri baked 48 cookies and divided them evenly into bags. Let n represent the number of cookies Teri put in each bag. Write an expression for the number of bags she filled.

_____

Circle the letter of the correct answer.

5. Marisa purchased canned soft drinks for a family reunion. She purchased 1 case of 24 cans and several packages containing 6 cans each. If p represents the number of 6-can packages she purchased, which of the following expressions represents the total number of cans Marisa purchased for the reunion?

   A $24 + 6p$

   B $24 - 6p$

   C $6 + 24p$

   D $6 - 24p$

6. Becky has the addresses of many people listed in her e-mail address book. She forwarded a copy of an article to all but 5 of those people. If a represents the number of addresses, which of the following expressions represents how many people she sent the article to?

   F $a + 5$

   G $5a$

   H $a - 5$

   J $a \div 5$

7. Mei bought several CDs for $12 each. Which of the following expressions could you use to find the total amount she spent on the CDs?

   A $12 + x$

   B $12 - x$

   C $12x$

   D $12 \div x$

8. Tony bought 2 packs of 50 plates and 1 pack of 30 plates. Which of the following expressions could you use to find the total number of plates Tony bought?

   F $2 + 50 + 30$

   G $(2 \cdot 50) + 30$

   H $(2 \cdot 30) + 50$

   J $2(30 + 50)$

Name _____ Date _____ Class _____

LESSON 2-2

Practice B

Translate Between Words and Math

Write an expression.

1. Terry's essay has 9 more pages than Stacey's essay. If s represents the number of pages in Stacey's essay, write an expression for the number of pages in Terry's essay.

_____

2. Let z represent the number of students in a class. Write an expression for the number of students in 3 equal groups.

_____

Write each phrase as a numerical or algebraic expression.

3. 24 multiplied by 3 _____

4. n multiplied by 14 _____

5. w added to 64 _____

6. the difference of 58 and 6 _____

7. m subtracted from 100 _____

8. the sum of 180 and 25 _____

9. the product of 35 and x _____

10. the quotient of 63 and 9 _____

11. 28 divided by p _____

Write two phrases for each expression.

12. $n + 91$ _____

13. $35 \div r$ _____

14. $20 - s$ _____

15. Charles is 3 years older than Paul. If y represents Paul's age, what expression represents Charles's age?

_____

16. Maya bought some pizzas for $12 each. If p represents the number of pizzas she bought, what expression shows the total amount she spent?

_____

Name _____ Date _____ Class _____

LESSON 2-2

Practice A

Translate Between Words and Math

Circle the letter of the correct answer.

1. Which of the following is the solution to an addition problem?
   - **A** product
   - **B** sum
   - **C** plus
   - **D** add

2. Which of the following is the solution to a subtraction problem?
   - **F** minus
   - **G** times
   - **H** difference
   - **J** less

3. Which word phrase represents the following expression: $5 \cdot 3$?
   - **A** the product of 5 and 3
   - **B** 5 less than 3
   - **C** the quotient of 5 and 3
   - **D** the sum of 5 and 3

4. Which word phrase represents the following expression: $14 \div n$?
   - **F** the difference of 14 and n
   - **G** 14 more than n
   - **H** take away n from 14
   - **J** the quotient of 14 and n

Match each situation to its algebraic expression below.

A. $8 \div x$ **B.** $8x$ **C.** $8 - x$ **D.** $x + 8$ **E.** $x - 8$ **F.** $x \div 8$

5. 8 take away x _____
6. x divided by 8 _____
7. the product of 8 and x _____
8. the quotient of 8 and x _____
9. 8 more than x _____
10. x decreased by 8 _____

11. Lily bought 14 beads and lost some of them. This situation is modeled by the expression $14 - x$. What does x represent in the expression?

    _____

    _____

12. The pet store put the same number of hamsters in 6 cages. This situation is modeled by the expression $6n$. What does n represent?

    _____

    _____

Name _____ Date _____ Class _____

LESSON 2-2

Reteach

Translate Between Words and Math

There are key words that tell you which operations to use for mathematical expressions.

Addition (combine)	Subtraction (less)	Multiplication (put together groups of equal parts)	Division (separate into equal groups)
add	minus	product	quotient
plus	difference	times	divide
sum	subtract	multiply	
total	less than		
increased by	decreased by		
more than	take away		

You can use key words to help you translate between word phrases and mathematical phrases.

A. 3 plus 5 → $3 + 5$

B. 3 times x → $3x$

C. 5 less than p → $p - 5$

D. h divided by 6 → $h \div 6$

Write each phrase as a numerical or algebraic expression.

1. 4 less than 8 _____

2. q divided by 3 _____

3. f minus 6 _____

4. d multiplied by 9 _____

You can use key words to write word phrases for mathematical phrases.

A. $7k$

- the product of 7 and k
- 7 times k

B. $5 - 2$

- 5 minus 2
- 2 less than 5

Write a phrase for each expression.

5. $z \div 4$ _____

6. $5 \cdot 6$ _____

7. $m - 6$ _____

8. $s + 3$ _____

Addition Words

1. Add
2. Altogether
3. Both
4. In all
5. Sum
6. Total

Subtraction Words

1. Difference
2. Fewer
3. How many more
4. How much more
5. Left
6. Less: Debra bought apples for $3.20 and oranges for $4.23. How much **less** did the apples cost?
7. Minus
8. Need to
9. Remains
10. Subtract

10. Words ending with "er"; higher, longer, faster, heavier, larger, shorter, slower, farther, etc. Example: Jean's apple weighs 100 grams, and Karen's apple weighs 80 grams. How much **heavier** is Jean's apple?

Multiplication Words

1. Times: Maria ran around the track 5 **times.** It took her 5 minutes to run around the track. How many minutes did she run?

2. Every: Kim buys 2 apples **everyday**. How many apples does she buy in a week?

3. At this rate: Ed reads 25 words per minute. **At this rate**, how many words does he read in one hour?

Division Words

1. Each: Ken has 75 pencils and 15 boxes. How many pencils should he pack in **each** box so each customer gets the same number of pencils?

Name_____

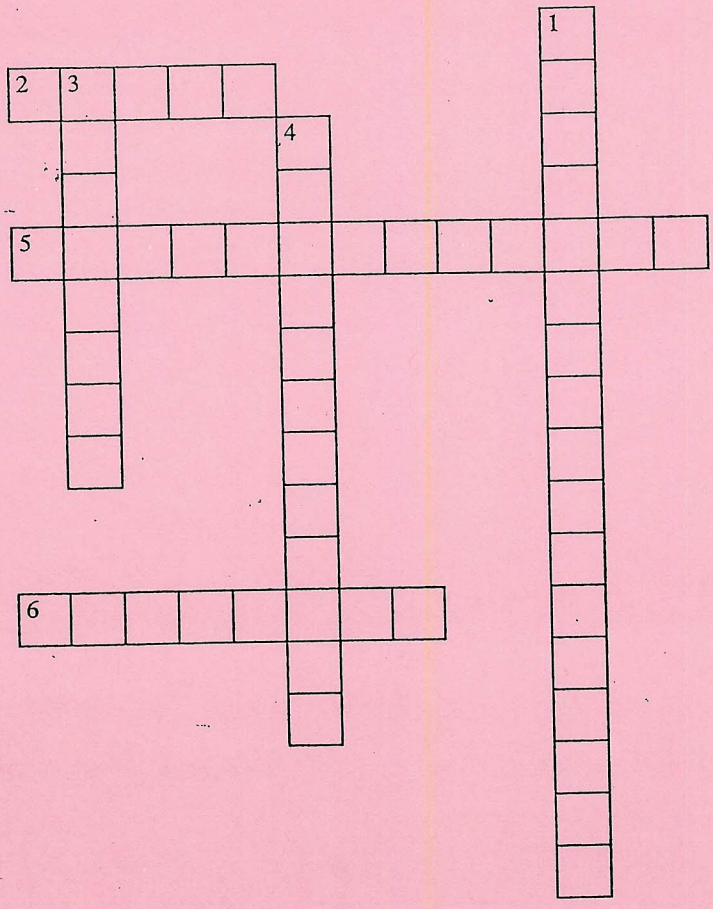
Class_____

Date_____

6.7 Vocabulary Words

1.	Underestimate	An estimate that is less than exact answer.
2.	Overestimate	An estimate that is greater than the exact answer.
3.	Compatible Numbers	Numbers used to make estimates that are easy to work with mentally and are close to the given number.
4.	Estimate	To find an approximate answer by using rounded numbers.
5.	Front-end-estimator	Using the "front" digits of numbers t o estimate answers.
6.	Rounding	Replacing a number with one that tells about how many or how much.

SOL 6.7 Vocabulary Crossword



ACROSS

2 End Estimation/Using the "front" digits of numbers to estimate the answer.

5 An estimate that is less than the exact answer.

6 To find an approximate answer by using rounded numbers.

DOWN

1 Numbers used to make estimates that are easy to work with mentally and are close to the given number.

3 Replacing a number with one that tells about how many or how much.

4 An estimate that is greater than the exact answer.

NAME _____ DATE _____ PERIOD ____

7-3 Practice: Word Problems

Multiplying Mixed Numbers

FOOD For Exercises 1–3, use the table. The table shows Keith's food options for a 7-day outdoor survival course.

Food Options for 7-day Outdoor Survival Course	
peanut butter	1 plastic jar = $4\frac{3}{5}$ cups
dried noodles/rice	$14\frac{2}{3}$ cups
dried fruit/nuts	$6\frac{1}{6}$ cups
concentrated juice boxes	8 boxes = $16\frac{1}{4}$ cups
beef jerky	$3\frac{1}{3}$ cups
powdered milk	1 box = $8\frac{4}{5}$ cups
dehydrated soup	5 packages = $15\frac{2}{3}$ cups
canned tuna/meat	4 cans = $5\frac{3}{5}$ cups

1. Keith wants to divide his tuna over the seven-day course. How many cups of tuna meat can Keith plan on consuming each day?

2. Keith would like to bring enough concentrated juice in order to have $2\frac{1}{4}$ cups available per day. How much juice does he need and is 8 boxes of concentrated juice enough?

3. Six other students have been advised to bring the same menu on the course. How many cups of dried fruits and nuts will the students be bringing all together?

4. MEASUREMENT Bill wants to put a large mural on a wall that is $9\frac{1}{3}$ feet long and $8\frac{1}{8}$ feet wide. Find the area of the wall. If the mural is 100 square feet, will it fit on the wall?

5. PAINTING Pam is mixing $3\frac{1}{5}$ batches of paint. If one batch calls for $2\frac{3}{4}$ tablespoons of detergent to add to the tempera powder, how many tablespoons of detergent will Pam need?

6. COOKING To make a batch of fruit punch, Steve needs $2\frac{2}{3}$ cups blackberry juice. If he wants to make $2\frac{3}{4}$ batches of punch, how many cups of blackberry juice will he need?

Lesson 7–3

Name: _____ Date: _____

Decimals Exercise 68: Adding and Subtracting Decimals

Solve the following subtraction problems.

1. 4.67
   - 3.45

2. 20.18
   - 9.21

3. 345.07
   - 236.71

4. 56.001
   - 47.067

5. 237.321
   - 111.002

6. 8977.10
   - 988.40

Solve the following subtraction problems. Rearrange the problems in the rectangles below. Keep the decimal points aligned.

7. 50.89 - 34.67

8. 280.09 - 190.70

9. 7802.245 - 3578.003

10. 503.89 - 64.98

7. 8. 9. 10.

Solve the following problems. Rearrange each problem in column form. Keep the decimal points aligned.

11. 30.78 - 25.09

12. 123.89 + 56.3 + 210.0

13. 567.302 - 12.113

14. 907.12 - 98.001

15. 0.836 + 0.9 + 79.003 + 1.41

11. 12. 13. 14. 15.

NAME _____ DATE _____ PERIOD _____

7-4 Practice: Word Problems

Dividing Fractions

1. **PIZZA** Norberto has $\frac{9}{10}$ of a pizza. The pizza will be divided equally among 6 people. How much will each person get?	2. **CARPENTRY** Laura wants to cut a board into three equal pieces. The board is $\frac{5}{8}$ feet long. How long will each piece be?
3. **PETS** Errol uses $\frac{1}{3}$ can of wet dog food for his dog, Muddy, each day. How many servings will he get from 5 cans of dog food?	4. **ICE CREAM** Julia ate $\frac{1}{2}$ pint of mint chocolate chip ice cream. Mark ate $\frac{3}{4}$ pint of malt ice cream. How many times more ice cream did Mark eat?
5. **GARDENING** Talia wants to give away 6 bundles of rosemary from her herb garden. If she has $\frac{1}{2}$ pound of rosemary, how much will each bundle weigh?	6. **SCHOOL** Kirsten has $\frac{3}{4}$ hour left to finish 5 math problems on the test. How much time does she have to spend on each problem?
7. **FOOD** Joe has $\frac{1}{2}$ of a cake he would like to split among 3 people. What part of the cake will each person get?	8. **INTERNET** $\frac{3}{4}$ of college students use the Internet more than the library. $\frac{9}{100}$ use the library more. How many times more students use the Internet?

Name: _____ Date: _____

Decimals Exercise 59: Converting Decimals to Fractions

Complete the blanks in the table below.

	Decimal	Fraction/Mixed Number	Simplified
1.	0.10		
2.	0.30		
3.	0.2		
4.	0.35		
5.	0.8		
6.	0.75		
7.	0.250		
8.	0.23		
9.	0.125		
10.	0.375		
11.	0.625		
12.	0.5		
13.	0.15		
14.	0.07		
15.	0.002		
16.	1.12		
17.	3.5		
18.	2.09		
19.	1.254		
20.	10.75		

$0.25 = \frac{1}{4}$ $0.5 = \frac{1}{2}$ $0.75 = \frac{3}{4}$

$1.375 = 1\frac{3}{8}$ $7.125 = 7\frac{1}{8}$

NAME _____ DATE _____ PERIOD _____

4-4 Practice: Word Problems

Dividing by Decimals

MARATHON For Exercises 1 and 2, use the table that shows course records for the Boston Marathon.

Course Records for the Boston Marathon			
Division	**Record-holder**	**Year**	**Time (hours)**
Men's Open	Cosmas Ndeti	1994	2.121
Women's Open	Margaret Okayo	2002	2.345
Men's Wheelchair	Heinz Frei	1994	1.356
Women's Wheelchair	Jean Driscoll	1994	1.523

1. The Boston Marathon is 26.2 miles. Use the times shown in the table to calculate the miles per hour for each division winner. Round to the nearest thousandth.

2. To the nearest hundredth, how many times greater was the men's open time than the women's wheelchair time?

3. DRIVING The Martinez family drove 48.7 miles to the river. It took them 1.2 hours to get there. How fast did they drive? Round to the nearest whole number.

NAME _____ DATE _____ PERIOD ____

4-2

Practice: Word Problems

Multiplying Decimals

4. **DRIVING** Ana bought a van that holds 20.75 gallons of gas and gets an average of 15.5 miles per gallon. How many miles can she expect to go on a full tank?

5. **INCOME** Ishi makes $8.50 an hour rolling sushi at Kyoto Japanese Restaurant. His paycheck shows that he worked 20.88 hours over the past two weeks. How much did Ishi make before taxes?

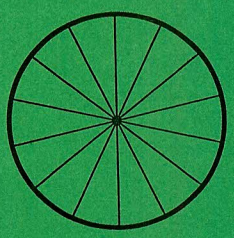
6. **TRAVEL** Manny is on vacation in France. He rented a car to drive 233.3 kilometers from Paris to Brussels and wants to figure out the distance in miles. To convert from kilometers to miles, he needs to multiply the total kilometers by 0.62. How many miles will Manny drive?

Comparing Fractions

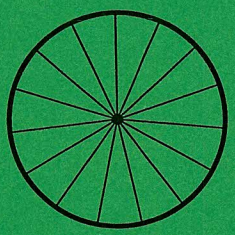
Name: _____ Date: _____

Shade each pair of shapes to match the fractions shown. Write ">" in the circle if the one on the left is larger, and write "<" if the one on the right is larger.

(1)



$\frac{5}{14}$ ○ $\frac{2}{15}$



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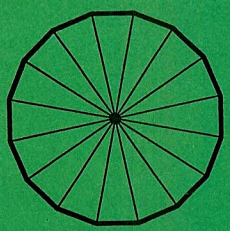
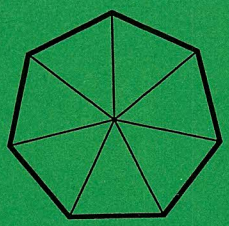


$\frac{7}{16}$ ○ $\frac{1}{7}$



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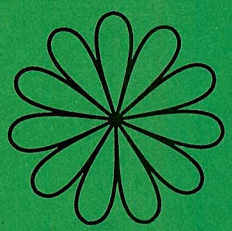
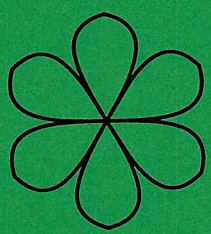


$\frac{8}{11}$ ○ $\frac{2}{6}$



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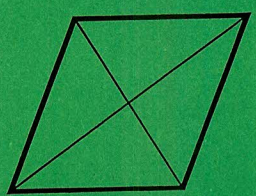
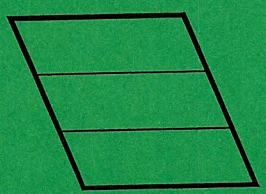
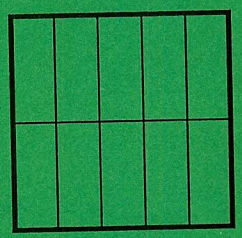


$\frac{2}{4}$ ○

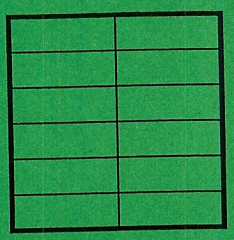


$\frac{1}{3}$

(5)

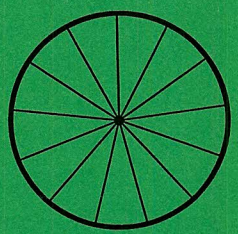


$\frac{1}{10}$ ○

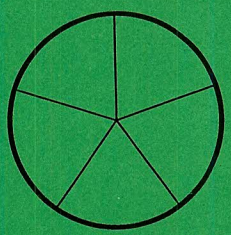


$\frac{5}{12}$

(6)

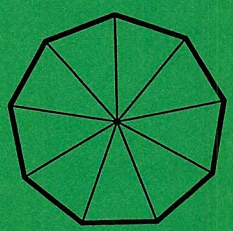


$\frac{9}{13}$ ○

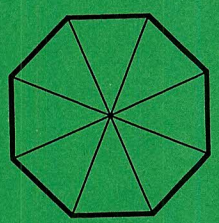


$\frac{2}{5}$

(7)

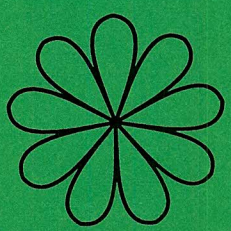


$\frac{8}{9}$ ○

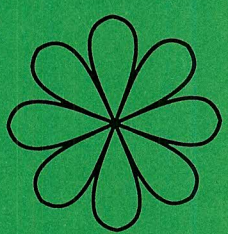


$\frac{6}{8}$

(8)



$\frac{5}{9}$ ○



$\frac{2}{8}$

Multiplication with Mixed Fractions

Name: _____ Date: _____

Solve the following fraction math problems and reduce to lowest terms.

(1) $2\frac{4}{5} \times \frac{6}{7} =$

(2) $1\frac{1}{6} \times \frac{2}{7} =$

(3) $4\frac{2}{3} \times \frac{1}{6} =$

(4) $1\frac{5}{8} \times \frac{1}{3} =$

(5) $4\frac{1}{6} \times \frac{1}{8} =$

(6) $1\frac{3}{7} \times \frac{1}{2} =$

(7) $2\frac{3}{8} \times \frac{3}{5} =$

(8) $1\frac{1}{3} \times \frac{1}{2} =$

(9) $5\frac{5}{7} \times \frac{4}{5} =$

(10) $5\frac{2}{7} \times \frac{1}{2} =$

(11) $4\frac{5}{6} \times \frac{1}{2} =$

(12) $5\frac{3}{5} \times \frac{5}{6} =$

(13) $5\frac{3}{8} \times \frac{1}{2} =$

(14) $1\frac{2}{5} \times \frac{3}{4} =$

NAME _____ DATE _____ PERIOD ____

1-1 Study Guide and Intervention

A Plan for Problem Solving

When solving problems, it is helpful to have an organized plan to solve the problem. The following four steps can be used to solve any math problem.

1 Explore – Read and get a general understanding of the problem.

2 Plan – Make a plan to solve the problem and estimate the solution.

3 Solve – Use your plan to solve the problem.

4 Examine – Check the reasonableness of your solution.

EXAMPLE 1 **SPORTS The table shows the number of field goals made by Henry High School's top three basketball team members during last year's season. How many more field goals did Brad make than Denny?**

Name	3-Point Field Goals
Brad	216
Chris	201
Denny	195

Explore You know the number of field goals made. You need to find how many more field goals Brad made than Denny.

Plan Use only the needed information, the goals made by Brad and Denny. To find the difference, subtract 195 from 216.

Solve $216 - 195 = 21$; Brad made 21 more field goals than Denny.

Examine Check the answer by adding. Since $195 + 21 = 216$, the answer is correct.

EXERCISES

1. During which step do you check your work to make sure your answer is correct?

2. Explain what you do during the first step of the problem-solving plan.

SPORTS For Exercises 3 and 4, use the field goal table above and the four-step plan.

3. How many more field goals did Chris make than Denny?

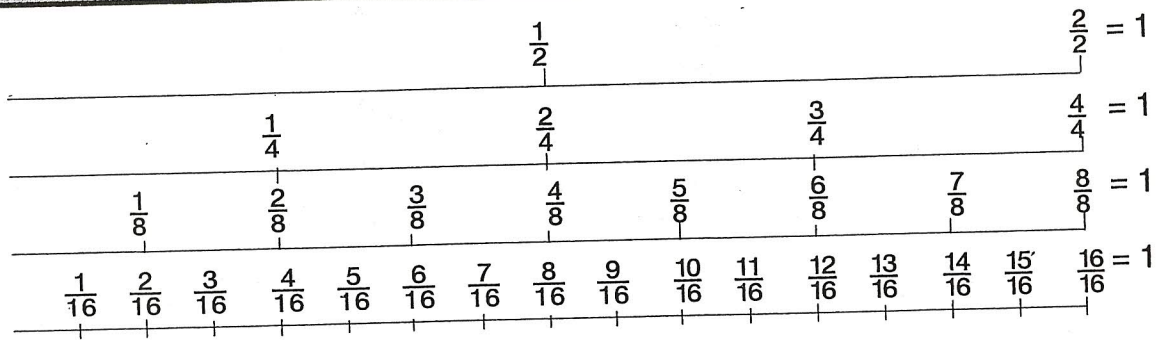
4. How many field goals did the three boys make all together?

Lesson 1–1

Addition and Subtraction of Fractions

Name _____

Date _____



Fractions can be added and subtracted. In learning to add and subtract fractions, it is important to remember that the top number of the fraction is the numerator, and the bottom number is the denominator. For example, in the fraction $\frac{3}{8}$, the 3 is the numerator and the 8 is the denominator.

In adding or subtracting fractions, it is the numerators that are added or subtracted, not the denominators. For example, in adding $\frac{1}{8} + \frac{2}{8}$, the numerators 1 + 2 are added to get 3, but the denominators are not added since the denominators tell what is being added.

So $\frac{1}{8} + \frac{2}{8} = \frac{3}{8}$

Add these:

1. $\frac{1}{4} + \frac{2}{4} = \frac{\quad}{4}$
2. $\frac{1}{8} + \frac{5}{8} = \frac{\quad}{8}$
3. $\frac{1}{7} + \frac{4}{7} = \frac{\quad}{7}$
4. $\frac{1}{5} + \frac{3}{5} = \frac{\quad}{5}$
5. $\frac{1}{16} + \frac{3}{16} = \frac{\quad}{16}$
6. $\frac{1}{3} + \frac{1}{3} = \frac{\quad}{3}$
7. $\frac{2}{9} + \frac{3}{9} = \frac{\quad}{9}$
8. $\frac{3}{8} + \frac{4}{8} = \frac{\quad}{8}$

In all of the above, the denominators for each problem are the same. What happens if we add two fractions with denominators not alike? What about $\frac{1}{8} + \frac{1}{4}$? One of the denominators must be changed so that both are the same number. Look at the fraction chart above. Find $\frac{1}{4}$ and look directly below the it. One fourth ($\frac{1}{4}$) is the same as $\frac{2}{8}$. In the problem $\frac{1}{8} + \frac{1}{4}$, the $\frac{1}{4}$ can be replaced with $\frac{2}{8}$ because they are the same amount. Now $\frac{1}{8} + \frac{2}{8}$ can be added. The denominators must be the same number before adding fractions.

SOL 6.7

Estimate to solve the problems.

1. Mr. Carr bought 19 gallon of paint. Each gallon of paint covers an area of about 350 square feet of wall space. About how many square feet will 19 gallon of paint cover?

_____

2. Katrina is making braided bracelets to sell at the fair. Each bracelet uses 3.2 feet of string. Katrina has 1,237 feet of string. About how many bracelets can she make if she uses all of the string?

_____

3. Denny bought 18 bags of dog food and 11 bags of cat food for the animal shelter. Each bag of food weighs 10 3/4lb. Estimate the total weight of all the bags.

_____

4. The table below shows the numbers of active pilots for 3 different years. No pilots were active for more than one of the given years.

PILOT CERTIFICATED HELD

YEAR	NUMBER
1970	720,028
1990	702,659
2001	622,274

What is a reasonable estimate for the total number of active pilots for the years 1970, 1990, and 2001?

_____

MASTER SKILLS MATH 6

Name: _____

Adding and Subtracting Decimals

Directions: Add or subtract the following problems.

1. $\begin{array}{r} 53.5 \\ 20.07 \\ +\ 1.85 \\ \hline \end{array}$

2. $\begin{array}{r} 0.05 \\ 0.83 \\ +\ 1.04 \\ \hline \end{array}$

3. $\begin{array}{r} 25.4 \\ 16.09 \\ +\ 31.62 \\ \hline \end{array}$

4. $\begin{array}{r} 16.28 \\ 2.43 \\ +\ 11.11 \\ \hline \end{array}$

5. $\begin{array}{r} 14.29 \\ -\ 11.17 \\ \hline \end{array}$

6. $\begin{array}{r} 48.90 \\ -\ 16.49 \\ \hline \end{array}$

7. $\begin{array}{r} 29.62 \\ -\ 19.55 \\ \hline \end{array}$

8. $\begin{array}{r} 84.13 \\ -\ 15.25 \\ \hline \end{array}$

9. $\begin{array}{r} 4.32 \\ 17.1 \\ 206.06 \\ +\ 20.121 \\ \hline \end{array}$

10. $\begin{array}{r} 1.46 \\ 8.2 \\ 3.003 \\ +10.0 \\ \hline \end{array}$

11. $\begin{array}{r} 146.023 \\ -\ 37.105 \\ \hline \end{array}$

12. $\begin{array}{r} 275.486 \\ -\ 75.5 \\ \hline \end{array}$

13. The principal organized the creation of a flower garden in front of the school. She purchased 50 daffodils for $23.50, 25 geraniums for $17.75 and 3 rose bushes for $4.00 each. How much did she spend on flowers altogether?

_____

14. In order to complete the project, she would also need topsoil at $10.75 per bag, a shovel at $5.25 each, fertilizer at $3.50 per bag and mulch at $4.15 per bag. She bought two of everything. She only had $100 to spend for this entire project. How much money, if any, did she have left?

_____

Name _____ Class _____ Date _____

Practice 2-4 Problem-Solving Strategy: Too Much or Too Little Information

Use any strategy to solve each problem. If it is not possible to solve, tell what needed information is missing.

1. Mary Jo wants to buy some stamps and three envelopes. Envelopes cost $.10 each, and stamps cost $.29 each. How much will the stamps and envelopes cost?

_____

_____

2. Royce earns $200 per week, plus $50 for every stereo system that he sells. Last week, he earned $850. How many stereo systems did Royce sell last week?

_____

_____

3. Four friends were standing in the lunch line. Tom was not last. Hank was in line immediately after Cindy. Tom and Beverly had at least one person between them. In what order were the four standing?

_____

_____

4. A store had a grand-opening sale on Friday and Saturday. Over 400 people attended on Friday, and four times as many people attended on Saturday. If each person attending had to buy a ticket to enter, how many tickets were needed?

_____

_____

5. You have a set of models of two-dimensional shapes. A balance scale balances with one triangle and three squares on one side, and one square, two circles, and one triangle on the other side. Each triangle weighs 2 kg. Each square weighs 3 kg. How much does each circle weigh?

_____

_____

6. Rodrigo wants to double a recipe requiring 1 c milk and 3 c flour. How much cinnamon should he add?

_____

_____

7. The Smythe children take turns picking which TV show to watch. Jo picks first since she is the youngest. Lyle picks immediately before Mark. Meg picks before Beth, but after Lyle. In what order do the children pick which TV show to watch?

_____

_____

8. The Hsu family pays $15 per month for trash pickup, plus $7 per large item. How much did they pay for trash pickup last year if they got rid of an old couch and a refrigerator?

_____

_____

NAME _____

Check What You Know

Multiplying and Dividing Decimals

Multiply or divide.

	a	b	c	d
1.	2.86×0.3	238.2×3.6	3.152×13	0.82×0.43
2.	$\$35.26 \times 32$	$\$78.53 \times 16$	0.652×100	0.0037×10
3.	3.21×8.72	0.598×5.37	0.0032×0.42	74.6×0.033

Divide and check by multiplying.

4. $7\overline{)39.9}$ $5\overline{)61.65}$ $0.08\overline{)64}$ $0.3\overline{)726}$

5. $0.6\overline{)0.036}$ $0.05\overline{)37.5}$ $0.83\overline{)2.1995}$ $3.8\overline{)0.019}$

6. $14\overline{)\$7.70}$ $18\overline{)\$102.24}$ $0.056\overline{)9.8}$ $3.4\overline{)0.085}$

NAME _____

Check What You Learned

Adding and Subtracting Decimals

CHAPTER 6 POSTTEST

Change the fractions to decimals.

	a	b	c	d	e
1.	$\frac{4}{10}$ _____	$\frac{37}{1000}$ _____	$\frac{1}{5}$ _____	$\frac{1}{4}$ _____	$\frac{23}{50}$ _____

Change the decimals to fractions or mixed numerals in simplest form.

2. 0.16 _____ 0.95 _____ 2.75 _____ 3.5 _____ 4.01 _____

Compare each pair of decimals using <, >, or =.

	a	b	c
3.	5.113 ___ 5.112	42.882 ___ 43.88	4.6 ___ 4.600

Add or subtract.

	a	b	c	d
4.	36.48 22.15 + 4.36	823.74 +308.81	72.3 5.272 + 3.17	109.2 5.738 + 0.62
5.	82.256 −39.888	6.88 −2.95	8.4 −3.562	57.1 −32.012
6.	$58.25 +56.75	$3522.47 + 428.53	$24.67 2.88 + 1.93	$7.25 0.88 +1.38
7.	$62.58 −27.35	$70.00 −32.48	$3.32 −2.87	$200.00 −187.02

SOL 6.7

Estimate to solve the problems.

1. The members of the basketball team sold 884 pizzas during a fundraiser. Each pizza sold for $9.95. About how much money did the member raise?

_____

2. Stephanie earned $ 283.25 selling picture frames at a craft fair. She sold each frame for $9.75. About how many picture frames did she sell?

_____

3. A bag of potting soil contains 90 cups of soil. A small flowerpot uses about 2 1/4 cups of soil. About how many flower pots can be filled from the whole bag

_____

4. In 1900, the population of Virginia was 1,854,184. In 2000, the population was 7,078,515. About how many people lived in Virginia in 2000 than in 1900?

_____

Lesson 2 Estimation Practice

Name: _____ **Date:** _____

1. Estimate each of the following problems.
2. Indicate which method of estimation you used for each problem.
3. Solve each problem.
4. Compare your solutions with your estimations to check for reasonableness.

a. $42.7 + 68.9 =$

b. $3.001 + 0.957 =$

c. $3.02 - 1.99 =$

d. $112.25 - 36.49 =$

e. $28.5 \times 0.34 =$

f. $1.48 \times 0.55 =$

g. $78.6 \div .2 =$

h. $85.55 \div 2.5 =$

NAME _____ DATE _____ PERIOD ____

4-2 Practice: Word Problems

Multiplying Decimals

4. **DRIVING** Ana bought a van that holds 20.75 gallons of gas and gets an average of 15.5 miles per gallon. How many miles can she expect to go on a full tank?

5. **INCOME** Ishi makes $8.50 an hour rolling sushi at Kyoto Japanese Restaurant. His paycheck shows that he worked 20.88 hours over the past two weeks. How much did Ishi make before taxes?

6. **TRAVEL** Manny is on vacation in France. He rented a car to drive 233.3 kilometers from Paris to Brussels and wants to figure out the distance in miles. To convert from kilometers to miles, he needs to multiply the total kilometers by 0.62. How many miles will Manny drive?

NAME _____ DATE _____ PERIOD ____

4-4

Practice: Word Problems

Dividing by Decimals

MARATHON For Exercises 1 and 2, use the table that shows course records for the Boston Marathon.

Course Records for the Boston Marathon			
Division	**Record-holder**	**Year**	**Time (hours)**
Men's Open	Cosmas Ndeti	1994	2.121
Women's Open	Margaret Okayo	2002	2.345
Men's Wheelchair	Heinz Frei	1994	1.356
Women's Wheelchair	Jean Driscoll	1994	1.523

1. The Boston Marathon is 26.2 miles. Use the times shown in the table to calculate the miles per hour for each division winner. Round to the nearest thousandth.

2. To the nearest hundredth, how many times greater was the men's open time than the women's wheelchair time?

3. DRIVING The Martinez family drove 48.7 miles to the river. It took them 1.2 hours to get there. How fast did they drive? Round to the nearest whole number.

Lesson 19 Solve Problems with Real-World Data

SOL 6.8

Ready Reference

budget a tool used to plan how money is spent

Think About It

Solving problems with decimals and fractions is part of daily life. Think of some ways people use decimals and fractions every day. This may include buying an item at a store, cooking, driving, purchasing gasoline, making crafts, and planning a budget.

Mimi gets a weekly allowance of $20. She also earns $16 babysitting. She wants to save some of the money each week to buy a DVD player. Mimi decides she needs to make a plan of how she will spend her allowance each week, so she makes a budget.

Here's How

Planning and making a budget.

Step 1 First, Mimi needs to think about how she earns and spends her money. What items does she buy each month? How much does she want to save toward the DVD player each month? Does she earn any money other than her allowance?

Step 2 Determine Mimi's earnings. Mimi receives an allowance of $20 each week. She also earns $16 each week babysitting.

Step 3 Determine Mimi's expenses. Mimi usually goes to one movie during the weekend. A movie costs $10. She almost always gets popcorn, which costs $3.50. Mimi spends $5 each week for snacks and supplies in the after-school program. She also rents a DVD each week for $5.50.

Step 4 Draw a chart or table to make a budget. List Mimi's earnings and find the total amount she earns each week. Then, list each expense and find her total expenses.

Mimi earns _____ each week. She spends _____ each week. Find the amount of money she has left to save each week.

$36.00 − _____ = _____

Mimi can save _____ each week toward the DVD player.

Mimi's Weekly Bud

Earnings	
Allowance	$2(
Babysitting	$1
Total Expenses	____
Expenses	
Movie	$1
Popcorn	$
Snacks & Supplies	$
DVD Rental	$
Total Expenses	____

actice

formation from the tables below to answer problems 1–5.

Jack's Earnings

Week	Amount
1	$397.00
2	$383.75
3	$356.25
4	$415.25

Jack's Monthly Expenses

rent	$540.00
groceries	$150.00
entertainment	$95.00
gasoline	$55.00
insurance	$125.00

at are Jack's total earnings for the four weeks? _____

hat are Jack's total monthly expenses? _____

ow much more did Jack earn in Week 4 than in Week 3? _____

ck earns $10.65 per hour. About how many hours does Jack work each week?

_____

the earnings in the chart reflect Jack's average monthly earnings, about how much will ack earn in a year?

_____

Does Jack earn enough money to pay his monthly expenses? Explain how you found your answer.

_____

6 A recipe for granola uses $\frac{1}{4}$ teaspoon of cinnamon. A recipe for muffins uses $\frac{3}{8}$ teaspoon of cinnamon. Dee doubles the recipe for the granola and triples the recipe for the muffins. How much cinnamon does she use in all? Show your work.

_____

7 A group of 6 friends earned a total of $432.60 selling items at a yard sale. They decided to divide the money equally. How much money did each person get? Show your work.

_____

8 Roberto bought a turkey sandwich for $3.75, a bag of chips for $0.89, and a bottle of water for $1.29. He paid for the food with a $10 bill. How much change did he get back? Show your work. _____

Use the table below to answer problems 9–11.

Amount of Beans Needed for Soup

Type of Bean	Amount (cups)
Navy Bean	$1\frac{1}{4}$
Lima Beans	$\frac{3}{4}$
Pinto Beans	$\frac{1}{2}$

9 What is the total amount of beans needed for the soup? _____

10 Mrs. Jefferson wants to triple the recipe. How many navy beans does she need? _____

11 Mr. Yang wants to make one-third of the recipe. How many of each kind of bean does he need?

_____

ormation below to answer problems 12–17.

ets a weekly allowance of $15. He also earns $12 each weekend doing yard
ach week he spends $7.50 on video game rentals, $9.50 going to the movies,
buying lunch at the mall.

e space below to plan and make a weekly budget for Philip.

iat are Philip's total weekly earnings?

$15.00
$25.00
$27.00
$22.00

14 What are his total weekly expenses?

F $22.00
G $27.00
H $21.00
J $23.00

ow much money does Philip have left
er each week?

$4.00
$5.00
$12.00
$10.00

16 It rains one weekend and Phillip cannot do yard work. He still wants to go to the movies. What else can he do if he only has his allowance?

F He can rent video games.
G He can still do everything he usually does.
H He can only go to the movies.
J He can buy lunch at the mall.

ip wants to buy a digital camera that costs $129.50. If he saved all of his leftover
ney each week, how many weeks would it take to save enough money for the
nera? Show your work. _____

NAME _____ DATE _____ PERIOD ____

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Chris	201
Denny	195

Explore You know the number of field goals made. You need to find how many more field goals Brad made than Denny.

Plan Use only the needed information, the goals made by Brad and Denny. To find the difference, subtract 195 from 216.

Solve $216 - 195 = 21$; Brad made 21 more field goals than Denny.

Examine Check the answer by adding. Since $195 + 21 = 216$, the answer is correct.

EXERCISES

1. During which step do you check your work to make sure your answer is correct?

2. Explain what you do during the first step of the problem-solving plan.

SPORTS For Exercises 3 and 4, use the field goal table above and the four-step plan.

3. How many more field goals did Chris make than Denny?

4. How many field goals did the three boys make all together?

Lesson 1–1

Name_____ Skill: Multiplying Fractions

Multiply. Change answers to simplest form.

1. $\frac{3}{5} \times \frac{2}{6} =$

2. $\frac{2}{4} \times \frac{3}{7} =$

3. $\frac{1}{9} \times \frac{3}{6} =$

4. $\frac{3}{9} \times \frac{2}{5} =$

5. $\frac{3}{8} \times \frac{5}{6} =$

6. $\frac{4}{7} \times \frac{3}{8} =$

7. $\frac{4}{6} \times \frac{2}{5} =$

8. $\frac{3}{4} \times \frac{2}{3} =$

9. $\frac{2}{5} \times \frac{6}{8} =$

10. $\frac{2}{4} \times \frac{1}{6} =$

11. $\frac{3}{5} \times \frac{7}{8} =$

12. $\frac{1}{4} \times \frac{1}{5} =$

13. $\frac{2}{7} \times \frac{4}{5} =$

14. $\frac{3}{6} \times \frac{1}{6} =$

15. $\frac{1}{3} \times \frac{4}{7} =$

Total Problems 15 Problems Correct ____

Name_____

Skill: Multiplying Mixed Numbers and Whole Numbers

Multiply. Change answers to simplest form.

1. $2 \times 2\frac{1}{3} =$

2. $4 \times 5\frac{1}{8} =$

3. $7 \times 1\frac{3}{4} =$

4. $3 \times 5\frac{1}{5} =$

5. $6 \times 3\frac{1}{6} =$

6. $7 \times 2\frac{3}{5} =$

7. $9 \times 3\frac{2}{3} =$

8. $5 \times 6\frac{5}{8} =$

9. $4 \times 2\frac{1}{2} =$

10. $8 \times 9\frac{1}{10} =$

11. $3 \times 9\frac{1}{3} =$

12. $7 \times 2\frac{1}{7} =$

Total Problems 12 Problems Correct ____

Lesson 1-1

Example 1 Use the Problem-Solving Plan

ENROLLMENT The enrollment at Sunview Elementary School is 523 students. Blue Hills Elementary School in the same school district has 112 fewer students. How many students does Blue Hills Elementary School have?

Explore You know the enrollment at Sunview Elementary School and the difference between Sunview's enrollment and Blue Hills' enrollment. You need to find the enrollment at Blue Hills Elementary School.

Plan To find the enrollment at Blue Hills, subtract 112 from the enrollment at Sunview. Use mental math or paper and pencil.

Solve $523 - 112 = 411$
The enrollment at Blue Hills Elementary School is 411 students.

Examine The answer seems reasonable. Since $411 + 112 = 523$, the answer is correct.

Example 2 Use the Problem-Solving Plan

READING Drew brings home a new book from the library. On the first night he reads 15 pages, on the second night, 25 pages, and on the third night, 35 pages. If the pattern continues, how many pages will Drew read on the fifth night?

Explore You know the number of pages Drew reads for the first three nights. You need to find the number of pages he reads on the fifth night.

Plan Since an exact answer is needed and the question contains a pattern, use mental math.

Solve $15 \overset{+10}{\rightarrow} 25 \overset{+10}{\rightarrow} 35 \overset{+10}{\rightarrow} 45 \overset{+10}{\rightarrow} 55$
The numbers increase by 10. So, Drew will read 55 pages on the fifth night.

Examine Since $55 - 45 = 10$, $45 - 35 = 10$, $35 - 25 = 10$, and $25 - 15 = 10$, the answer is correct.

Lesson 3-4

Example 1 Use Estimation to Solve Problems
FAST FOOD Estimate the total amount of sandwiches sold weekly if 32.5 thousand burgers are sold and 18.3 thousand chicken sandwiches are sold.

Round each number to the nearest ten for easier adding.

$$\begin{array}{rcrl} 32.5 & \rightarrow & 30 & 32.5 \text{ rounds to } 30. \\ +\ 18.3 & \rightarrow & +20 & 18.3 \text{ rounds to } 20. \\ & & 50 & \end{array}$$

There are about 50 thousand sandwiches sold.

Example 2 Use Estimation to Solve Problems
ATHLETIC SHOES One store has a particular pair of athletic shoes priced at $49.95. A second store has the same shoes priced at $62.49. Estimate the difference in the prices at the two stores.

$$\begin{array}{rcrl} \$62.49 & \rightarrow & \$60 & \$62.49 \text{ rounds to } \$60. \\ -\ \$49.95 & \rightarrow & -\ \$50 & \$49.95 \text{ rounds to } \$50. \\ & & \$10 & \end{array}$$

The difference in the two prices is about $10.

Example 3 Use Front-End Estimation
Estimate 42.5 + 31.3 using front-end estimation.

Add the front digits. Then add the next digits.

$$\begin{array}{r} 42.5 \\ +\ 31.3 \\ \hline 7 \end{array} \quad \rightarrow \quad \begin{array}{r} 42.5 \\ +\ 31.3 \\ \hline 73 \end{array}$$

Using front-end estimation, 42.5 + 31.3 is about 73.

Lesson 3-5

Example 1 Add Decimals
Find the sum of 53.6 and 25.1.

Estimate $53.6 + 25.1 \rightarrow 54 + 25 = 79$

$$\begin{array}{r} 53.6 \\ +\ 25.1 \\ \hline 78.7 \end{array}$$

Line up the decimal points.

Add as with whole numbers.

The sum of 53.6 and 25.1 is 78.7. Compare to the estimate.

Example 2 Subtract Decimals
Find 9.537 – 5.315.

Estimate $9.537 - 5.315 \rightarrow 10 - 5 = 5$

$$\begin{array}{r} 9.537 \\ -\ 5.315 \\ \hline 4.222 \end{array}$$

Line up the decimal points.

Subtract as with whole numbers.

So, $9.537 - 5.315 = 4.222$ Compare to the estimate.

Example 3 Annex Zeros
Find 8 – 3.54.

Estimate $8 - 3.54 \rightarrow 8 - 4 = 4$

$$\begin{array}{r} 8.00 \\ -\ 3.54 \\ \hline 4.46 \end{array}$$

Annex zeros.

So, $8 - 3.54 = 4.46$. Compare to the estimate.

Lesson 4-1

Example 1 Multiply Decimals
Find 15.3 × 4.

Method 1 Use estimation.
Round 15.3 to 15.
15.3 × 4 → 14 × 4 or 56

2 1
15.3
× 4
61.2 Since the estimate is 56, place the decimal point after the 1.

Method 2 Count decimal places.

2 1
15.3 There is one place to the right of the decimal point.
× 4
61.2 Count the same number of decimal places from right to left.

Example 2 Multiply Decimals
Find 7 × 0.72.

Method 1 Use estimation.
Round 0.72 to 1.
7 × 0.72 → 7 × 1 or 7

5 1
0.72
× 7
5.04 Since the estimate is 7, place the decimal point after the 5.

Method 2 Count decimal places.

5 1
0.72 There are two places to the right of the decimal point.
× 7
5.04 Count the same number of decimal places from right to left.

Lesson 4-3

Example 1 Divide a Decimal by a 1-Digit Number
Find 9.6 ÷ 3. Estimate $9 \div 3 = 3$

$$\begin{array}{r} 3.2 \\ 3\overline{)9.6} \\ -9 \\ \hline 06 \\ -\ 6 \\ \hline 0 \end{array}$$

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

Divide as with whole numbers.

$9.6 \div 3 = 3.2$ Compared to the estimate, the quotient is reasonable.

Example 2 Divide a Decimal by a 2-Digit Number
Find 5.22 ÷ 12. Estimate $5 \div 10 = 0.5$

$$\begin{array}{r} 0.435 \\ 12\overline{)5.220} \\ -48 \\ \hline 42 \\ -36 \\ \hline 60 \\ -60 \\ \hline 0 \end{array}$$

Place the decimal point.

Annex a zero and continue dividing.

$5.22 \div 12 = 0.435$ Compared to the estimate, the quotient is reasonable.

Example 3 Round a Quotient
GRID-IN TEST ITEM Jeremy purchased 4 DVDs for $136.11, including tax. If each DVD costs the same amount, what was the price of each DVD in dollars?

Read the Test Item To find the price of one DVD, divide the total cost by the number of DVDs purchased. Round to the nearest cent, or hundredths place, if necessary.

Solve the Test Item

$$\begin{array}{r} 34.027 \\ 4\overline{)136.110} \\ -12 \\ \hline 16 \\ -16 \\ \hline 01 \\ -\ 0 \\ \hline 11 \\ -\ 8 \\ \hline 30 \\ -28 \\ \hline 2 \end{array}$$

Place the decimal point.

Divide as with whole numbers.

Divide until you place a digit in the thousandths place.

To the nearest cent, the cost in dollars is $34.03

Lesson 6-2

Example 1 Fraction Sums and Differences

Estimate $\frac{7}{8}+\frac{1}{6}$.

$\frac{7}{8}$ rounds to 1. $\frac{1}{6}$ rounds to 0.

$\frac{7}{8}+\frac{1}{6}$ is about $1+0$ or 1.

Example 2 Fraction Sums and Differences

Estimate $\frac{13}{15}-\frac{5}{9}$.

$\frac{13}{15}$ rounds to 1. $\frac{5}{9}$ rounds to $\frac{1}{2}$.

$\frac{13}{15}-\frac{5}{9}$ is about $1-\frac{1}{2}$ or $\frac{1}{2}$.

Example 3 Mixed Number Sum

Estimate $3\frac{3}{7}+6\frac{9}{10}$.

$3\frac{3}{7}$ rounds to $3\frac{1}{2}$. $6\frac{9}{10}$ rounds to 7.

Estimate $3\frac{1}{2}+7=10\frac{1}{2}$

So, $3\frac{3}{7}+6\frac{9}{10}$ is about $10\frac{1}{2}$.

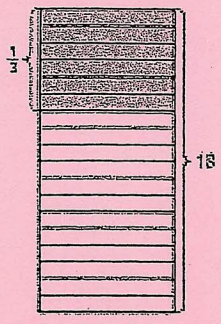
Lesson 7-1

Example 1 Estimate Using Compatible Numbers

Estimate $\frac{1}{3} \times 17$. $\frac{1}{3} \times 17$ means $\frac{1}{3}$ of 17.

$\frac{1}{3} \times 17 \rightarrow \frac{1}{3} \times 18$ 18 and 3 are compatible numbers since $18 \div 3 = 6$.

$\frac{1}{3} \times 18 = 6$ $18 \div 3 = 6$.



So, $\frac{1}{3} \times 17$ is *about* 6.

Example 2 Estimate Using Compatible Numbers

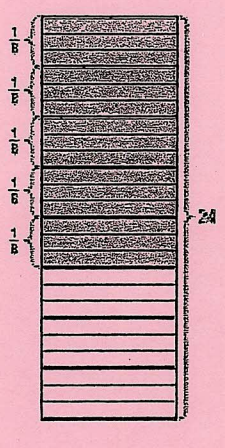
Estimate $\frac{5}{8} \times 25$.

Estimate $\frac{1}{8} \times 25$ first.

$\frac{1}{8} \times 25 \rightarrow \frac{1}{8} \times 24$ Use 24 since 24 and 8 are compatible numbers.

$\frac{1}{8} \times 24 = 3$ $24 \div 8 = 3$

If $\frac{1}{8}$ of 24 is 3, then $\frac{5}{8}$ of 24 is 5 × 3 or 15.



So, $\frac{5}{8} \times 25$ is *about* 15.

Lesson 1-1

Example 1 Use the Problem-Solving Plan

ENROLLMENT The enrollment at Sunview Elementary School is 523 students. Blue Hills Elementary School in the same school district has 112 fewer students. How many students does Blue Hills Elementary School have?

Explore You know the enrollment at Sunview Elementary School and the difference between Sunview's enrollment and Blue Hills' enrollment. You need to find the enrollment at Blue Hills Elementary School.

Plan To find the enrollment at Blue Hills, subtract 112 from the enrollment at Sunview. Use mental math or paper and pencil.

Solve $523 - 112 = 411$
The enrollment at Blue Hills Elementary School is 411 students.

Examine The answer seems reasonable. Since $411 + 112 = 523$, the answer is correct.

Example 2 Use the Problem-Solving Plan

READING Drew brings home a new book from the library. On the first night he reads 15 pages, on the second night, 25 pages, and on the third night, 35 pages. If the pattern continues, how many pages will Drew read on the fifth night?

Explore You know the number of pages Drew reads for the first three nights. You need to find the number of pages he reads on the fifth night.

Plan Since an exact answer is needed and the question contains a pattern, use mental math.

Solve

15		25		35		45		55
	+10		+10		+10		+10	

The numbers increase by 10. So, Drew will read 55 pages on the fifth night.

Examine Since $55 - 45 = 10$, $45 - 35 = 10$, $35 - 25 = 10$, and $25 - 15 = 10$, the answer is correct.

Name_____
Class_____
Date_____

6.7 Vocabulary Quiz

1. _____ Replacing a number with one that tells about how many or how much.

2. _____ Using the "front" digits of numbers to estimate the answer.

3. _____ Numbers used to make estimates that are easy to work with mentally and are close to the given number.

4. _____ To find an approximate answer by using rounded numbers.

5. _____ An estimate that is greater than the exact answer.

6. _____ An estimate that is less than the exact answer.

Underestimate
Rounding
Compatible Numbers
Front-end Estimation
Estimate
Overestimate

Name _____ Class Period 1 2 3 5 6

6.7 Class Practice Questions

1. **Each shelf in Gary's Grocery Store will hold 125 items. About how many items will 47 shelves hold?**

A 4,000 items
B 5,000 items
C 8,000 items
D 10,000 items

2. **Di will buy sandwiches for $2.95, $3.00, $2.75, and $3.25 from a vending machine where she works. About how much money does she need?**

A $10.00
B $11.00
C $12.00
D $13.00

3. **A social studies book has 404 pages. If each chapter is about 39 pages, how many chapters are in the social studies book?**

A 10 chapters
B 11 chapters
C 12 chapters
D 13 chapters

4. **Emily needs $4\frac{3}{4}$ yards of fabric to make a dress. About how many dresses can she make from 21 yards of fabric?**

A 4 dresses
B 5 dresses
C 6 dresses
D 7 dresses

5. **Dick made a paper airplane. The average distance his plane can fly is 20.12 m. About how far will his plane fly in 12 flights?**

A 220 m
B 240 m
C 260 m
D 280 m

6. **An auto mechanic tells John that labor is $47.00 per hour. If it takes the mechanic about $1\frac{1}{2}$ hours to fix John's car, about how much will the labor cost?**

A $60.00
B $75.00
C $90.00
D $95.00

7. **Sue is making a dress for a customer. She charges $20.25 an hour for labor. If it takes her $12\frac{1}{3}$ hours, about how much will the labor cost?**

A $120
B $240
C $360
D $420

8. **Jake makes $6.05 per hour. About how many hours does he need to work to make $250?**

A 30 hours
B 40 hours
C 50 hours
D 60 hours

9. **You are in charge of buying ice cream cones for the end of the year 6th grade party. There are 56 students in the 6th grade this year. You estimate that each person will eat 2 ice cream cones. If each box of cones has 12 cones, how many boxes should you buy?**

A 5 boxes
B 8 boxes
C 10 boxes
D 20 boxes