

About the Test Prep and Practice Workbook

Practice

The Practice exercises provide additional practice on the key concepts taught in the lesson.

Test Prep

Each Chapter contains a test to prepare students for standardized test questions, including multiple choice, multi-select, matching, and short answer.

Test Prep: Quarter

Use the Quarter Tests to measure your cumulative understanding of standards throughout the course. There are three tests, one to take after each of the first three quarters.

Test Prep: End of Course

The End of Course Test measures students' understanding of all content in this course. The assessment is designed to prepare students for standardized test questions, including multiple choice, multi-select, matching, and short answer.

3.1

Practice

Find the sum or difference.

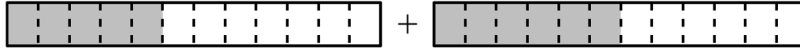
1. $\frac{9}{10} - \frac{3}{10}$

2. $\frac{3}{4} + \frac{2}{3}$

3. $\frac{7}{2} + \frac{7}{8}$

4. $\frac{5}{2} - \frac{13}{15}$

5. Write an expression represented by the model. Then draw a model to represent the sum.



6. Your friend finds the difference of $\frac{11}{15}$ and $\frac{3}{5}$. Is your friend correct? Explain your reasoning.

$\times \frac{11}{15} - \frac{3}{5} = \frac{8}{10}$

Find the sum or difference.

7. $3\frac{4}{7} - 1\frac{1}{7}$

8. $3\frac{7}{10} + 2\frac{1}{10}$

9. $6\frac{2}{3} - 1\frac{1}{6}$

10. $5\frac{1}{16} + 2\frac{1}{8}$

11. You are making two recipes. One recipe calls for $3\frac{2}{3}$ cups of flour and the other calls for $3\frac{5}{6}$ cups of flour. What is the total amount of flour you need to make the recipes?

12. The floor in one room has a length of $12\frac{1}{8}$ feet and the floor in another room has a length of $16\frac{3}{4}$ feet. What is the difference in the lengths?

13. Your friend was $48\frac{2}{3}$ inches tall. He grew $1\frac{7}{12}$ inches in one year. Since then, he has grown $2\frac{2}{3}$ inches. What is his height now?

14. A bag contains 24 ounces of pretzels. On Monday, you eat $3\frac{1}{4}$ ounces of pretzels and, on Tuesday, you eat $4\frac{1}{2}$ ounces of pretzels. How many ounces of pretzels are left in the bag?

15. A rectangular pool has a length of $6\frac{1}{3}$ yards and a width of $3\frac{1}{2}$ yards. Find the perimeter of the pool.

16. Use each of the numbers 1 to 6 exactly once to create a subtraction equation in the form shown. The fraction portion of each number should be proper.

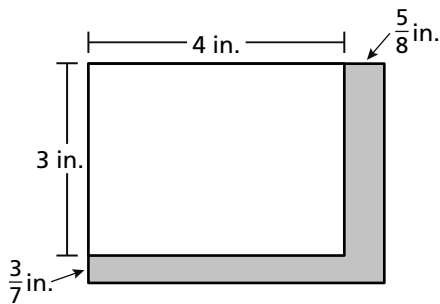
$$\square \frac{\square}{\square} - \square \frac{\square}{\square} = 1 \frac{5}{12}$$

3.2 Practice

1. Describe and correct the error in finding the product.

$$\times \quad \frac{5}{6} \times \frac{5}{6} = \frac{5 \times 5}{6} = \frac{25}{6} = 4\frac{1}{6}$$

2. One-half of your CDs are scratched. Of those, one-fifth will not play properly. You have 40 CDs. How many of them will not play properly?
3. You are making a poster with a partial border (the shaded region).



- a. Find the area of the partial border. Explain how you found the area.
- b. Using mixed numbers, write the expression to find the entire area (poster and partial border).
- c. Multiply the expression in part (b).
- d. Subtract the answer in part (a) from the answer in part (c). Explain what this represents.
4. Find a fraction that, when multiplied by $\frac{1}{3}$, is greater than $\frac{1}{4}$ and less than $\frac{1}{2}$.
5. You ask 120 people about their computer preference. The results show that $\frac{11}{12}$ of the people own a laptop computer. Of the people who own a laptop computer, $\frac{1}{10}$ of them also own a desktop computer.
- a. What portion of the people own a laptop computer and a desktop computer?
- b. How many people own a laptop computer but not a desktop computer? Explain.

3.3 Practice

1. Describe and correct the error in finding the quotient.

$$\times \quad \frac{3}{5} \div \frac{9}{10} = \frac{5}{3} \cdot \frac{10}{9} = \frac{50}{27} = 1 \frac{23}{27}$$

2. You have $\frac{5}{8}$ of a pepperoni pizza. You divide the remaining pizza into 3 equal slices. What portion of the original pizza is each slice?

Complete the statement.

3. $\frac{1}{6} \times \underline{\quad} = 1$

4. $8 \div \underline{\quad} = 40$

5. $\frac{11}{3} \div \underline{\quad} = 11$

Without finding the quotient, complete the statement using <, >, or =.

Explain your reasoning.

6. $4 \div \frac{6}{7} \underline{\quad} 4$

7. $1 \div \frac{2}{3} \underline{\quad} 1$

8. $\frac{4}{5} \div \frac{9}{10} \underline{\quad} \frac{4}{5}$

9. When is the reciprocal of a fraction the same as the fraction? Explain.
10. How many times larger is a 10-pound dog than a hamster weighing $\frac{5}{8}$ pound?
11. A container of coffee is $\frac{1}{6}$ full. The container contains $\frac{2}{3}$ of a pound of coffee.
- Write a division expression that represents the capacity of the container.
 - Write a related multiplication expression that represents the capacity of the container.
 - Find the capacity of the container.
12. A digital camera memory card is $\frac{1}{4}$ full. The card is $\frac{2}{3}$ full when 375 more pictures have been taken.
- How many pictures can the memory card hold?
 - How many pictures were originally on the memory card?
 - How many pictures are on the memory card when it is $\frac{5}{6}$ full?

3.4 Practice

1. Describe and correct the error in finding the quotient.

$$\times 8\frac{1}{3} \div 15 = \frac{25}{3} \div 15 = 15 \times \frac{3}{25} = \frac{45}{25} = 1\frac{20}{25}$$

2. How many times longer is a $20\frac{2}{5}$ -meter garden path than a $6\frac{4}{5}$ -meter garden path?
3. You have 187 yards of ribbon to attach to balloons. Each balloon will have the same length of ribbon. You want to use all the ribbon. Should each ribbon be $7\frac{1}{2}$, $8\frac{1}{2}$, or $9\frac{1}{2}$ feet long? Explain.
4. How many $3\frac{3}{4}$ -inch wires can be cut from a spool of wire that is 100 inches long? Will there be any wire left over? If so, how much?
5. A bag of fertilizer that weighs $18\frac{3}{4}$ pounds can cover 5000 square feet.
- How many pounds of fertilizer will be needed to cover 27,000 square feet?
 - How many bags of fertilizer are needed? Explain how you found your answer.
6. A package contains 56 cups of oatmeal. A batch of cookies requires $2\frac{3}{4}$ cups of oatmeal. Is there enough oatmeal to make 21 batches of cookies? Explain.
7. You have $14\frac{1}{2}$ cups of granola and 10 cups of peanuts to make trail mix. One batch of trail mix consists of $2\frac{3}{4}$ cups of granola and $1\frac{1}{3}$ cups of peanuts. What is the greatest number of full batches of trail mix you can make? Explain how you found your answer.
8. At a track and field meet, the longest discus throw by a 7th grader is 65 feet 4 inches. The longest discus throw by a 6th grader is 54 feet 7 inches. How many times greater is the longest discus throw by the 7th grader than by the 6th grader?

3.5 Practice

1. A large bottle of nasal spray is 9.46 centimeters tall. A small bottle is 5.29 centimeters tall. How much shorter is the small bottle than the large bottle?
2. A child must weigh no more than 34.5 pounds to ride in a particular car seat.
 - a. A child weighs 36.269 pounds. By how many pounds does the child exceed the weight limit?
 - b. A child weighs 31.833 pounds. How many pounds can the child gain before needing a new car seat?

3. The table shows the dimensions, in inches, of two picture frames that are in the shape of right triangles.

	Leg 1	Leg 2	Hypotenuse
Frame A	3	6.2	6.888
Frame B	4.2	5.1	6.607

- a. How much larger is the hypotenuse of Frame A than Frame B?
 - b. What is the perimeter of Frame A?
 - c. What is the perimeter of Frame B?
 - d. What is the sum of the two perimeters?
 - e. Find the sum of the two legs of each picture frame. Which frame has the larger sum of two legs?
4. At Station M, the price of gas is \$3.319 per gallon and the price of diesel is \$4.429 per gallon.
 - a. You buy 2 gallons of gas and your friend buys 2 gallons of diesel. How much more did your friend pay?
 - b. You have \$15.24. You buy 3 gallons of gas. How much money do you have left?
 - c. The price of gas goes up \$0.20 per gallon and the price of diesel goes down \$0.14 per gallon. How much more is the price of diesel per gallon than gas?

3.6 Practice

1. A sheet of rectangular paper has a width of 8.5 inches and a length of 11 inches. What is the area of the sheet of paper?
2. A manager is buying sandwiches for an office party. A deli sells each regular sandwich for \$6.99 and each specialty sandwich for \$10.97. The manager buys 12 regular sandwiches and 8 specialty sandwiches. How much more does the manager spend on specialty sandwiches than on regular sandwiches?

Without finding the product, complete the statement using $<$, $>$, or $=$.

Explain your reasoning.

3. 1.19×7 _____ 7
4. 0.86×11 _____ 11
5. 1.05×25 _____ 25
6. Your friend ran a 5-kilometer race. One kilometer is equal to about 0.62 mile.
 - a. During the race, your friend ran 1 mile every 12 minutes. How long did it take your friend to finish the race?
 - b. A lion can run 1 kilometer in 1.32 minutes. How many fewer minutes would it take the lion to run the race than your friend?

Describe the pattern. Find the next three numbers.

7. 0.2, 0.6, 1.8, 5.4, ...
8. 0.3, 1.8, 10.8, 64.8, ...
9. 0.00046, 0.0046, 0.046, 0.46, ...
10. 1.9, 13.3, 93.1, 651.7, ...
11. An environmental club is planning a trip to a marine rescue facility. To pay for the trip, the club is selling shirts as a fundraiser. The club will use the profit from selling shirts to pay for the trip. (*Hint: Profit = Price – Cost*)
 - a. The club paid \$11.85 for each shirt and is selling the shirts for \$20 each. How much profit will the club earn if they sell 25 shirts?
 - b. The trip will cost \$250. Any additional money the club earns will be donated to the marine rescue facility. How much money will the club donate to the rescue facility if they sell 60 shirts?

3.7 Practice

1. The weight of an object on the Moon is about 0.167 of its weight on Earth. How much does a 156.5-pound astronaut weigh on the Moon?

2. The table shows the cost (in cents) of producing and distributing each coin for the years 2007 and 2014.

Coin	2007	2014
Quarter	9.78	8.95
Dime	4.09	3.91
Nickel	9.53	8.09
Penny	1.67	1.66

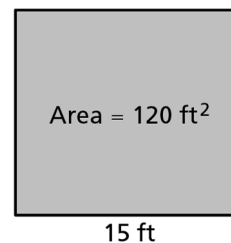
- a. Which coin(s) have a cost in 2014 that is less than 0.95 times the cost in 2007?
- b. How much more did it cost to produce 50 of each coin in 2007 than in 2014?
3. A store is selling sculptures. The first week, it prices 6 sculptures at \$80 each. After each week, if a sculpture is not sold, it will be priced to sell for 0.85 times the previous week's price. The store needs to sell the 6 sculptures for a total of \$270 to make a profit. What is the last week in which all 6 sculptures could be sold so that the store makes a profit?
4. Which is greater, $7.8 \cdot (6.9 + 3.5)$ or $7.8 + (6.9 \cdot 3.5)$? Explain your answer.
5. When multiplying, how many decimal places are in the product of $1.25 \times 1.25 \times 1.25 \times 1.25$? Explain your reasoning.
6. You buy 3.7 pounds of oranges at \$1.99 per pound and 2.425 pounds of pineapple at \$2.25 per pound. You hand the cashier a \$20 bill. How much change will you receive?

Describe the pattern. Find the next three numbers.

7. 0.5, 0.6, 0.72, 0.864, ...
8. 13.2, 6.6, 3.3, 1.65, ...
9. 2, 0.04, 0.0008, 0.000016, ...
10. 6, 1.8, 0.54, 0.162, ...
11. You are preparing for a trip to Canada. At the time of your trip, each U.S. dollar is worth 1.286 Canadian dollars and each Canadian dollar is worth 0.778 U.S. dollar.
- a. You exchange 180.5 U.S. dollars for Canadian dollars. How many Canadian dollars do you receive? Round the the nearest hundredth.
- b. You spend 165 Canadian dollars on the trip. Then you exchange the remaining Canadian dollars for U.S. dollars. How many U.S. dollars do you receive? Round the the nearest hundredth.

3.8 Practice

1. You sign up for 13 weeks of swim lessons. The total cost is \$325. What is the cost per week?
2. You have 800 square feet of a room reserved for tables.
 - a. Each round table requires 49 square feet. How many round tables will fit in 800 square feet?
 - b. Each rectangular table requires 64 square feet. How many rectangular tables will fit in 800 square feet?
 - c. The round tables seat 8 people. The rectangular tables seat 12 people. Using your answers in parts (a) and (b), which type of table will seat more people in the allotted 800 square feet, *round* or *rectangular*?
3. An auditorium seats 48 students per row. A total of 1665 students are in the auditorium today. All the rows are full except for the front row.
 - a. How many rows are in the auditorium?
 - b. How many students are in the front row?
4. A rectangular room has an area of 120 square feet.
 - a. The length of the room is 15 feet. Find the perimeter of the room.
 - b. You are laying baseboard along the perimeter of the room. The baseboard comes in 6-foot pieces. Using the perimeter of the room, write an expression for the number of baseboard pieces that are needed for the room. How many baseboard pieces should you buy?
 - c. The length of the room is longer than 6 feet. Write an expression to determine how many baseboard pieces are needed for each length of the room. How many baseboard pieces will fit along each length without being cut? How many feet of an additional baseboard piece are needed for each length?
 - d. Write an expression to determine how many baseboard pieces are needed for each width of the room. How many baseboard pieces will fit along each width without being cut? How many feet of an additional baseboard piece are needed for each width?
 - e. No partial baseboard piece can be less than 2 feet long. Using your answers in parts (c) and (d), will your answer to part (b) give you enough baseboard pieces? Explain.



3.9 Practice

1. A student has 30 identical marbles. Together, the marbles weigh 4.8 ounces. How much does one marble weigh?

2. The table shows the ounces and costs of three boxes of the same cereal. Which box of cereal is the best buy? Explain.

	Ounces	Cost
Cereal A	12	\$2.88
Cereal B	18	\$3.96
Cereal C	28	\$6.44

3. Write $2.7 \div 9$ as a multiplication problem with a missing factor. Explain your reasoning.
4. You are making 24 identical friendship bracelets using blue, green, yellow, and red string. You have a total of 307.2 feet of string, and each bracelet will use the same length of string.
- How much string will you use for each bracelet?
 - If you use the same length of each color string to make each bracelet, how much blue string will you use to make one bracelet?
5. Two trains are traveling at constant speeds. The first train travels 37.44 miles in 18 minutes. The second train travels 82.35 miles in 45 minutes.
- Which train is faster? Explain.
 - How long will it take the slower train to travel 366 miles?
6. Find the missing digit.

$$\begin{array}{r} \square .23 \\ 8 \overline{)49.8\square} \end{array}$$

7. At the beginning of a school year, a teacher buys notebooks, folders, and binders. The teacher paid \$21.36 for 12 notebooks and \$3.44 for 8 folders.
- How much more does a notebook cost than a folder?
 - The teacher bought 15 binders and spent \$19.74 more on binders than on notebooks. How much did each binder cost?

3.10

Practice

1. What is the quotient of 213.6 and 17.8?
2. Your friend rewrites the problem. Is your friend correct? Explain.

$\times \quad 4.1 \overline{)43.378} \longrightarrow 41 \overline{)43.378}$
3. A person’s walking stride is about 0.413 times the person’s height in inches. Your friend’s stride is 27.258 inches. How tall is your friend in feet?
4. You are saving your money to buy a guitar that costs \$275.75. You have \$40 and plan to save \$7.50 each week. Your uncle decides to give you an additional \$8 each week.
 - a. How many weeks will you have to save until you have enough money to buy the guitar?
 - b. How many more weeks would you have to save to buy a guitar that costs \$339.75? Explain how you found your answer.

Without finding the quotient, complete the statement using <, >, or =.
Explain your reasoning.

5. $4.58 \div 0.57$ ___ $45.8 \div 0.57$ 6. $24.5 \div 0.4$ ___ $24.5 \div 0.04$

7. Your parent competes in an Ironman competition. The table shows the finish times, in minutes, for each portion of the competition.

Swim	76.2
Bike	384.12
Run	265.29

- a. The swim course is 3.9 kilometers long. The bike course is 180.2 kilometers long. How many times greater is the kilometers per hour for the bike portion than the swim portion?
- b. The run course is 42.2 kilometers long. What is the overall kilometers per hour for the Ironman competition?
- c. Ironman competitions count transition times between the swim and the bike, and the bike and the run. The recorded overall kilometers per hour was 18.56 kilometers per hour. How many minutes did your parent spend in transition?

**Chapter
3****Test Prep****Multiply.**

1. $\frac{1}{6} \cdot \frac{2}{5}$

2. $\frac{1}{8} \times 1\frac{4}{9}$

3. $1\frac{1}{4} \cdot 8\frac{5}{8}$

Divide.

4. $\frac{2}{3} \div \frac{7}{9}$

5. $\frac{4}{9} \div 6$

6. $1\frac{1}{3} \div 1\frac{1}{6}$

Evaluate the expression.

7. $21.171 - 17.135 + 8.356$

8. $3.7(4.13 + 1.87)$

9. You make 12 equal payments. You pay a total of \$1524. How much is each payment?

- (A) \$127
(B) \$155
(C) \$1512
(D) \$1536

10. What is the quotient of 3808 and 200?

- (A) 19.04
(B) 22.02
(C) $19\frac{8}{3808}$
(D) $22\frac{4}{200}$

Chapter 3 **Test Prep** (continued)

11. Select all the true statements about the data.

26, 6, 13, 23, 14, 24, 22, 14, 26, 16, 26, 18

- (A) The mode of the data is 14.
- (B) The mean of the data is 19.
- (C) The median of the data is 20.
- (D) The range of the data is 8.
- (E) The interquartile range of the data is 11.

12. A pot contains 32 ounces of soil. You use $3\frac{1}{8}$ ounces of soil to plant 1 herb. Is there enough soil in the pot to plant 10 herbs?

Because you need
 (A) $3\frac{1}{8}$
 (B) $30\frac{1}{8}$
 (C) $31\frac{2}{8}$
 (D) $34\frac{1}{8}$
 ounces of soil for 10 herbs, there
 (A) is
 (B) is not
 enough soil.

13. The stem-and-leaf plot shows student test scores. Which statement about the stem-and-leaf plot is *not* true?

- (A) Seven students scored more than 45 points on the test.
- (B) Twelve students scored less than 50 points on the test.
- (C) Most students scored between 40 and 49 points on the test.
- (D) Three students scored no more than 40 points on the test.

Test Scores

Stem	Leaf
3	5 7 9
4	0 1 1 4 5 6 7 8 9
5	0 0 0

Key: 3 | 5 = 35 points

**Chapter
3****Test Prep** (continued)

14. You have 4 cups of raisins. A recipe calls for $\frac{3}{8}$ cup of raisins per serving. How many full servings can you make?

(A) 1
(B) 4
(C) 10
(D) 12

15. You run $9\frac{3}{5}$ miles as a part of an exercise routine. You run $\frac{1}{4}$ of that distance on a hill. You run down a slope for the last $\frac{3}{8}$ of the hill. On how many miles of your run do you run down the slope?

16. Evaluate the expression $9\frac{3}{4} + \left(1\frac{3}{5} \div \frac{1}{8}\right)$. Write the answer as a fraction or mixed number.

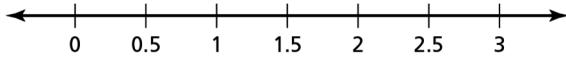
17. A patio is rectangular. Its length is 8.32 meters, and its width is 3.1 meters.

Select all the true statements.

(A) The length is 5.31 meters longer than the width.
(B) The width is less than half the length.
(C) The perimeter is about 5 times the width.
(D) To the nearest whole number, the perimeter is about 23 meters.
(E) To the nearest whole number, the area is about 26 square meters.

**Chapter
3****Test Prep** (continued)

18. The first four numbers in a pattern are 4, 3.6, 3.2, and 2.8. Plot the next three numbers in the pattern on the number line.



19. A container can hold a maximum of 17.5 pounds. There are two objects in the container. The first object weighs 2.65 pounds, and the second object weighs 10.8 pounds. How many more pounds can the container hold?

20. A store sells a 2-pound bag of walnuts for \$11.62 and a 3-pound bag of pecans for \$20.34.

Part A

How much does 1 pound of pecans cost?

Part B

You buy 6 pounds of walnuts and 6 pounds of pecans. You hand the cashier \$80. How much change will you receive?
