

Name \_\_\_\_\_

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

**Write the ratio in simplest form.**

- 1) An athlete ran 24 miles this week, including 9 miles today. Write the ratio of miles run this week to miles run today. 1) \_\_\_\_\_

**Write the percent as a decimal.**

- 2) 600% 2) \_\_\_\_\_

**Solve the problem.**

- 3) The sum of the page numbers on the facing pages of a book is 343. Find the larger page number. 3) \_\_\_\_\_

**Solve.**

- 4) Two cars leave a parking lot and travel in opposite directions. One travels at 9 miles per hour and the other travels at 5 miles per hour. In how many hours will the two cars be 56 miles apart? 4) \_\_\_\_\_

- 5) An investor has three investments which pay 4%, 5%, and 9%, respectively. He has three times as much invested at 5% than at 4% and \$500 more invested at 9% than at 4%. If the total interest from the investments after 1 year is \$1333, how much was invested at 5%? 5) \_\_\_\_\_

- 6) A writer received \$41,000 as royalty for her book. She invested part of the money in bonds paying 7% interest annually. The rest she invested in a life insurance policy paying 9% interest annually. If the total interest from the investments after 1 year is \$3390, how much did she invest in bonds? 6) \_\_\_\_\_

- 7) How many ounces of a 15% saline solution must be added to 30 ounces of a 5% saline solution to make a 10% saline solution? 7) \_\_\_\_\_

- 8) If 48 ounces of red beads that sell for \$9 per ounce are mixed with 52 ounces of golden beads that sell for \$7 per ounce, what should be the selling price of the mixture of beads? 8) \_\_\_\_\_

- 9) If two planes leave an airport at the same time with one flying west at 570 miles per hour and the other flying east at 580 miles per hour, how long will it take them to be 3450 miles apart? 9) \_\_\_\_\_

- 10) Adam and David were both driving east on the same highway. At 5:00 P.M., Adam, traveling at 60 miles per hour, was 20 miles east of David. A little later, David, traveling at 70 miles per hour, passed Adam. At what time did David pass Adam? 10) \_\_\_\_\_

- 11) A car traveling 61 miles per hour passes a bus traveling 55 in the same direction on the highway. If they maintain their speeds, how long will it take them to be 12 miles apart? 11) \_\_\_\_\_

**Solve the problem.**

- 12) The sum of two consecutive even integers is 78. Find the larger number. 12) \_\_\_\_\_

13) Matthew has two different stocks. One of the stocks is worth \$4 more per share than the other. He has 19 shares of the more valuable stock and 45 shares of the other stock. His total assets in stocks is \$1484. How much is the more expensive stock worth per share? 13) \_\_\_\_\_

14) Matthew has two different stocks. One of the stocks is worth twice as much per share as the other. He has 17 shares of the more valuable stock and 41 shares of the other stock. His total assets in stocks is \$2700. How much is the less expensive stock worth per share? 14) \_\_\_\_\_

**Solve.**

15) A square plywood platform has a perimeter which is 14 less than 11 times the length of a side. Find the length of a side. 15) \_\_\_\_\_

16) A triangular lake-front lot has a perimeter of 1000 feet. One side is 300 feet longer than the shortest side, while the third side is 400 feet longer than the shortest side. Find the lengths of all three sides. 16) \_\_\_\_\_

**Write the percent as a decimal.**

17)  $14\frac{1}{9}\%$  17) \_\_\_\_\_

**Write the percent as a fraction in simplest form.**

18)  $111\frac{1}{9}\%$  18) \_\_\_\_\_

19) 12.5% 19) \_\_\_\_\_

**Write as a percent. Round your answer to the nearest tenth, if necessary.**

20)  $\frac{16}{100}$  20) \_\_\_\_\_

21)  $\frac{1}{2}$  21) \_\_\_\_\_

**Write as a percent.**

22) 0.65 22) \_\_\_\_\_

23) 0.806 23) \_\_\_\_\_

**Translate word for word or to a proportion, then solve.**

24) What number is 16% of  $45\frac{1}{4}$ ? 24) \_\_\_\_\_

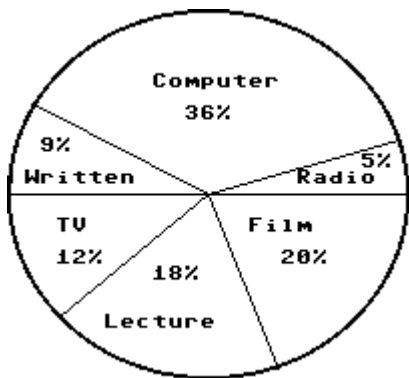
25) What number is 84% of 309? 25) \_\_\_\_\_

**Solve the problem.**

26) Students at Maple School earned \$216 selling candles. They want to accumulate \$2000 for a club trip. What percent of their goal has been reached? 26) \_\_\_\_\_

- 27) A chemical solution contains 7% calcium. How much calcium is in 2 mL of solution? 27) \_\_\_\_\_
- 28) Midtown Antiques collects 5% sales tax on all sales. If total sales including tax are \$ 1054.64, find the portion that is the tax. Round to the nearest cent if necessary. 28) \_\_\_\_\_
- 29) In a local election, 43,900 people voted. This was an increase of 14% over the last election. How many people voted in the last election? Round to the nearest whole person if necessary. 29) \_\_\_\_\_

A survey showed that students had these preferences for instructional materials. Use the graph to answer the question.



- 30) About how many students would you expect to prefer lectures in a school of 400 students? 30) \_\_\_\_\_
- 31) About how many students would you expect to prefer films in a school of 750 students? 31) \_\_\_\_\_

**Write the ratio in simplest form.**

- 32) There are 27 people on a commuter train. There are 6 people talking on cell phones. Write the ratio of people on the train to people talking on cell phones. 32) \_\_\_\_\_

**Solve the problem. Round, as appropriate.**

- 33) The following chart shows the number of games that three youth baseball teams have played and won this season. 33) \_\_\_\_\_

Team	Games Played	Games Won
Cubs	10	7
Giants	12	4
Cardinals	11	8

Write the unit ratio of games won to games played for the Cubs.

- 34) The price of a 16-ounce soft drink is \$2.39. Write the unit ratio that expresses the price to volume. 34) \_\_\_\_\_

**Tell which brand is the better buy.**

- 35) Brand X: 8 ounces for \$3.04; Brand Y: 10 ounces for \$4.00 35) \_\_\_\_\_
- 36) Brand A: 18 ounces for \$14.04; Brand B: 24 ounces for \$19.20 36) \_\_\_\_\_

Determine whether the ratios are equal.

37)  $\frac{5}{4} = \frac{?}{28}$

37) \_\_\_\_\_

38)  $\frac{14\frac{1}{3}}{6} = \frac{?}{36}$

38) \_\_\_\_\_

Solve for the missing number.

39)  $\frac{8}{-\frac{1}{7}} = \frac{42}{x}$

39) \_\_\_\_\_

40)  $\frac{33}{121} = \frac{9}{x}$

40) \_\_\_\_\_

Solve the problem.

41) Jim drove 357 miles in 7 hours. If he can keep the same pace, how long will it take him to drive 867 miles?

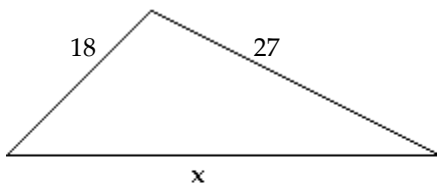
41) \_\_\_\_\_

42) If 2 sandwich rolls cost \$0.46, how much will 17 rolls cost?

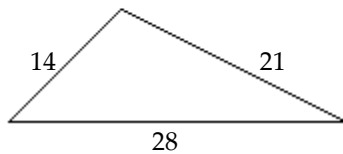
42) \_\_\_\_\_

Find any missing lengths in the similar figures.

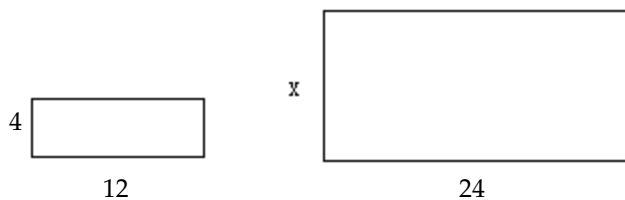
43)



43) \_\_\_\_\_



44)



44) \_\_\_\_\_

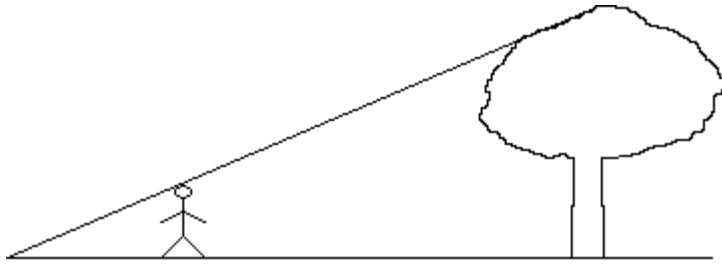
Solve the problem.

45) A line from the top of a cliff to the ground passes just over the top of a pole 6.0 feet high and meets the ground at a point 7.0 feet from the base of the pole. If the point is 99 feet from the base of the cliff, how high is the cliff to the nearest foot?

45) \_\_\_\_\_

46) Mieko, who is 1.61 m tall, wishes to find the height of a tree. She walks 18.92 m from the base of the tree along the shadow of the tree until her head is in a position where the tip of her shadow exactly overlaps the end of the tree top's shadow. She is now 6.02 m from the end of the shadows. How tall is the tree? Round to the nearest hundredth.

46) \_\_\_\_\_



## Answer Key

### Testname: CARSON GILLESPIE JORDAN PRACTICE PROBLEMS CHAPTER 3

- 1)  $\frac{8}{3}$
- 2) 6
- 3) 172
- 4) 4 hr.
- 5) \$13,800
- 6) \$15,000
- 7) 30 ounces
- 8) \$7.96
- 9) 3 hr.
- 10) 7:00 P.M.
- 11) 2 hr.
- 12) 40
- 13) \$26 per share
- 14) \$36 per share
- 15) 2
- 16) 100 ft., 400 ft., 500 ft.
- 17)  $0.14\bar{1}$
- 18)  $1\frac{1}{9}$
- 19)  $\frac{1}{8}$
- 20) 16%
- 21) 50%
- 22) 65%
- 23) 80.6%
- 24)  $7\frac{6}{25}$
- 25) 259.56
- 26) 10.8%
- 27) 0.14 mL
- 28) \$50.22
- 29) 38,509 people
- 30) About 72 students
- 31) About 150 students
- 32)  $\frac{9}{2}$
- 33)  $\frac{0.7}{1}$
- 34)  $\frac{\$0.15}{1 \text{ oz.}}$
- 35) Brand X
- 36) Brand A
- 37) Yes
- 38) Yes
- 39)  $-\frac{3}{4}$
- 40) 33

## Answer Key

Testname: CARSON GILLESPIE JORDAN PRACTICE PROBLEMS CHAPTER 3

41) 17 hours

42) \$3.91

43)  $x = 36$

44)  $x = 8$

45) 85 feet

46) 6.67 m