

Mid-Year Test Modules 6–8

1. What is the ratio of squares to circles?



2. On the class field trip, there were 4 teachers and 35 students. Which of the following is the ratio of students to teachers on this trip?

3. Which of the following ratios is **not** equivalent to the other three?

- A $\frac{2}{5}$ C 8 to 20
 B $\frac{4}{10}$ D 10 to 15

4. An 8-pound bag of apples costs \$17.50. What is the unit price?

5. It took 20 minutes to print out a 250-page report. At this speed, how many pages could this printer produce in 30 minutes?

6. Dana measured the height of her bedroom wall to be 3 yards tall. Which of these is closest to the equivalent measurement?

- A 0.6 kilometers
 B 3.5 meters
 C 274.3 centimeters
 D 7834.7 millimeters

7. Mattias bought a package of 5 notebooks for \$13.95. What is the unit price per notebook?

8. Which of the following ratios is equivalent to 8:3? Select Yes or No.

A $\frac{3}{8}$ Yes No

B $\frac{24}{9}$ Yes No

C $\frac{16}{6}$ Yes No

9. Trudy is making punch by mixing 1 can of concentrated juice with 3 cans of water. Which of the following combinations shows the same ratio of juice to water?

A 2 c juice to 4 c water Yes No

B 2 c juice to 6 c water Yes No

C 3 c juice to 9 c water Yes No

D 3 c juice to 6 c water Yes No

10. The table shows how much money three employees are paid per hour of work.

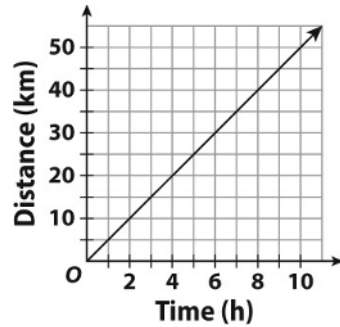
Employee	Hourly Rate (\$)
Kyle	35
Sidney	40
Patricia	55

Suppose each employee works for 30 hours next week. How much more than Sidney will Patricia be paid?

11. A carpenter worked for 4 days to finish a repair job. She charged \$825 for 15 hours plus \$278 for materials. What is the carpenter's rate per hour?

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12. The graph below shows the rate of speed of a group of hikers.



Which of the following is an ordered pair on the graph? Select Yes or No.

- A (2, 10) Yes No
 B (3, 20) Yes No
 C (4, 25) Yes No
 D (8, 40) Yes No
13. The table below shows the cost of renting a sailboat at a lake.

Cost of Renting a Sailboat

Cost (\$)	300	450	900	1,200
Hours	2	3	6	8

Which of the following represents the cost?

- A hours \times 15
 B hours \times 150
 C hours \div 150
 D hours \div 300
14. The scale on a map shows that 1.5 centimeters represents 200 kilometers. On the map, two cities are 6 centimeters apart. What is the actual distance between these two cities?
- _____

15. The numbers in the table below show a multiplicative relationship.

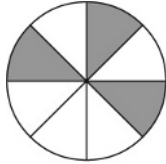
A	2	4	6	8	10
B	6	12	x	y	30

What are the two values for x and y?

16. The sixth grade is charging \$9 per car to wash cars. The fifth grade is charging \$8.50 per car. Suppose each grade washes 50 cars. How much more money will the sixth grade earn?
- _____
17. Hal can buy 6 yards of canvas at a total cost of \$15. How much would it cost to buy 10 yards at the same price per yard?
- _____
18. The ratio of boys to girls at a day care center is 5 to 4. The following **could** be the total number of children at the center. Select True or False.
- A 27 children True False
 B 54 children True False
 C 60 children True False
 D 72 children True False
19. The ratio of wins to losses for a basketball team is 2 : 3. The following is a possible total number of games. Select True or False.
- A 6 games True False
 B 10 games True False
 C 25 games True False
 D 26 games True False
20. How many ounces of nuts are in a box that holds 3.2 pounds?
- _____

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21. What percent of the circle below is shaded?



22. What percent of 18 is 27?

23. There are 65 students in a science club. 40% of them bought a club T-shirt with a picture of Albert Einstein. How many Einstein T-shirts were purchased?

24. Which of these is equivalent to 40%? Select Yes or No.

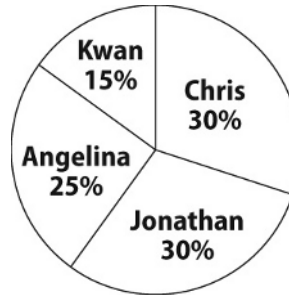
- A $\frac{1}{4}$ Yes No
 B $\frac{2}{5}$ Yes No
 C 0.04 Yes No
 D 0.4 Yes No

25. Marge has saved \$350 toward the cost of her vacation. The vacation will cost \$1,750. What percent of the cost of the vacation has Marge saved?

26. The committee to plant more trees has raised 40% of their goal. They want to raise \$3,000. How much more money do they need to raise to meet their goal?

- A \$1,200 C \$1,600
 B \$1,400 D \$1,800

27. The results of a school election are shown in the circle graph below.



There were 2,500 votes cast in all. How many votes did Angelina receive?

28. Ms. Burger has graded 45 tests. This represents 60% of her 3 math classes. How many math students does Ms. Burger teach?

29. The costume committee has made 20 costumes. This is 80% of the total number of costumes needed for the school play. How many more costumes do they need to make?

- A 5 costumes
 B 8 costumes
 C 16 costumes
 D 25 costumes

30. One-fifth of the members of a senior citizen's club signed up for a computer workshop. What percent of the club did **not** sign up for the workshop?

31. A toy company wants to sell 1,600 toy airplanes this year. So far, they have sold 600. What percent of the sales goal have they reached?

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32. The ratio of boys to girls in the checkers club at one school is 2:3. The number of club members is more than 20 and fewer than 30. How many club members are there?

33. It took Elizabeth 10 days to read a 450-page biography. She read about the same number of pages of the book each day. How many pages did Elizabeth read each day?

34. The ratio of cats to dogs at the city animal shelter today is 5:6. There are 35 cats at the shelter. How many dogs are at the shelter today?

35. The staff of the Westport Public Library signed up 6 volunteers in the last 21 days. If the library staff continues to sign up volunteers at this rate, how many new volunteers will they get in the next 7-day week?

36. A car driving cross-country traveled 180 miles in 4 hours. At this rate of speed, how many miles farther will the car travel in the next 3 hours?

37. Jeremy measured the height of a basketball net to be 10 feet off the ground. What is the equivalent measurement in meters?

38. The scale on a roadmap is listed as 1 inch: 80 miles. On the map, Belleville and San Jose are 1.5 inches apart. What is the actual distance in miles between the two cities?

39. Belina bought $4\frac{1}{2}$ yards of red fabric. She also bought 6 yards of white fabric. How many more **inches** of white fabric than red fabric did Belina buy?

40. Nels needs 15 gallons of lemonade for a company picnic. If he buys the lemonade in quart bottles, how many bottles does Nels need to buy?

41. Travant is planning a garden that will cover 1,600 square yards. He wants the ratio of space planted with flowers to space planted with vegetables to be 3:5. How many square yards of flowers will Travant's garden have?

42. What percent of the design below is shaded gray?

