CHAPTER 6

Name _____ Date _____

Chapter Test B

For use after Chapter 6

Order the ratios from least to greatest.

1. $\frac{3}{50}$, 4 to 52, 7 : 99, $\frac{11}{120}$, 17 : 333

2. 2 : 17, $\frac{1}{9}$, 3 to 29, $\frac{12}{101}$, 7 : 66

Find the unit rate.

3. $\frac{186 \text{ rotations}}{12 \text{ min}}$

4. $\frac{210 \text{ km}}{22 \text{ h}}$

5. $\frac{\$1582.75}{5 \text{ days}}$

Write the equivalent rate.

6. $\frac{5 \text{ mi}}{1 \text{ min}} = \frac{? \text{ ft}}{1 \text{ min}}$

7. $\frac{400 \text{ m}}{20 \text{ sec}} = \frac{? \text{ m}}{1 \text{ h}}$

8. $\frac{\$620}{1 \text{ ton}} = \frac{? \$}{1 \text{ lb}}$

Solve the proportion.

9. $\frac{a}{15} = \frac{162}{45}$

10. $\frac{x}{350} = \frac{48}{175}$

11. $\frac{19}{22} = \frac{209}{c}$

12. $\frac{69}{300} = \frac{46}{y}$

13. $\frac{120}{44} = \frac{90}{w}$

14. $\frac{d}{218} = \frac{95}{545}$

15. $\frac{28}{1.6} = \frac{z}{12}$

16. $\frac{5}{m} = \frac{0.2}{13}$

17. $\frac{17}{3.4} = \frac{57}{p}$

18. You are having a picnic and need to buy paper plates. A store sells two different brands of paper plates. Brand A costs \$.96 for 12 paper plates, and Brand B costs \$1.40 for 20 paper plates. How much money will you save if you buy 60 of the brand of paper plates with the lower unit price?

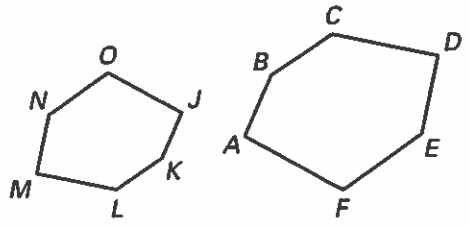
Find the value of x.

19. $\frac{21}{56} = \frac{9}{x + 10}$

20. $\frac{66}{x - 8} = \frac{18}{15}$

21. $\frac{12 - x}{34} = \frac{40}{85}$

22. Given $JKLMNO \sim ABCDEF$, name the corresponding angles and the corresponding sides.



Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____

CHAPTER 6 Continued

Name _____ Date _____

Chapter Test B

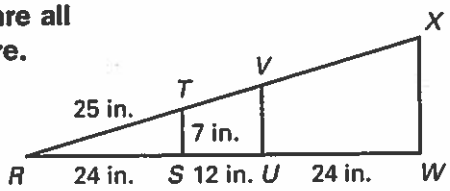
For use after Chapter 6

Given $\triangle RST$, $\triangle RUV$, and $\triangle RWX$ are all similar, find the indicated measure.

23. *UV*

24. *RV*

25. *RX*



A map has a scale of 1 inch : 250 miles. Use the given map distance to find the actual distance.

26. $\frac{1}{2}$ in. **27.** $\frac{3}{8}$ in. **28.** $1\frac{1}{2}$ in. **29.** $5\frac{3}{4}$ in.

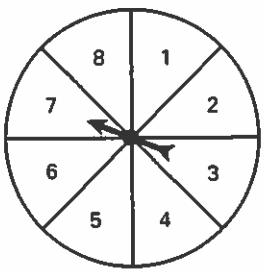
A map has a scale of 1 centimeter : 120 kilometers. Use the given actual distance to find the distance on the map.

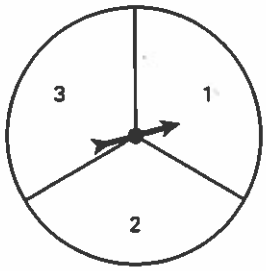
30. 60 km **31.** 30 km **32.** 1296 km **33.** 300 km

34. A bag contains 20 blue marbles, 12 red marbles, and 8 yellow marbles. You choose a marble at random from the bag, and then you place the marble back into the bag. If you repeat this for a total of 20 times, how many times would you expect to choose a red marble from the bag?

35. You are taking part in a contest in which there is a prize hidden in a large rectangular field. The field is 144 feet by 96 feet. Each person taking part in the contest searches their own 12-foot by 12-foot square area of the field. What is the probability that the prize is in the region of the field that you search?

In Exercises 36 and 37, use the counting principle to find the total number of possible outcomes. Then determine the probability of the specific event. Each spinner is divided into equal parts.





36. You spin each spinner once. What is the probability that each spinner stops on 1?

37. You spin each spinner once. What is the probability that both spinners stop on the same number?

Answers

23. _____

24. _____

25. _____

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

CHAPTER 6

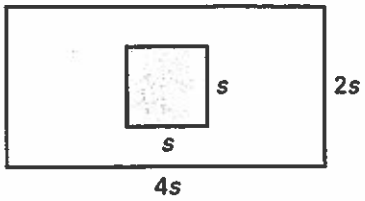
Name _____ Date _____

Chapter Test C

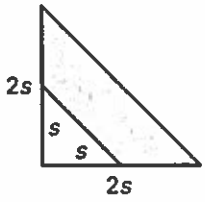
For use after Chapter 6

Find the ratio of the area of the shaded region to the area of the unshaded region. The figures are composed of rectangles, squares, and right triangles.

1.



2.



Find the unit rate.

3. $\frac{926 \text{ cycles}}{30 \text{ sec}}$

4. $\frac{110 \text{ mi}}{90 \text{ min}}$

5. $\frac{\$2.25}{3 \text{ days}}$

Write the equivalent rate.

6. $\frac{2 \text{ mi}}{1 \text{ min}} = \frac{? \text{ in.}}{1 \text{ min}}$

7. $\frac{15 \text{ m}}{1 \text{ min}} = \frac{? \text{ m}}{1 \text{ day}}$

8. $\frac{\$3.60}{1 \text{ gal}} = \frac{? \$}{1 \text{ pt}}$

Solve the proportion.

9. $\frac{a}{2} = \frac{16.5}{4.4}$

10. $\frac{4.5}{13.5} = \frac{90}{w}$

11. $\frac{0.8}{0.9} = \frac{5.6}{y}$

12. $\frac{0.75}{0.6} = \frac{6}{c}$

13. $\frac{x}{400} = \frac{12.4}{0.2}$

14. $\frac{0.42}{d} = \frac{1.5}{2.5}$

Find the value of x.

15. $\frac{5}{9} = \frac{x}{x+4}$

16. $\frac{11}{x} = \frac{55}{72-x}$

17. $\frac{x-7}{10} = \frac{x}{5}$

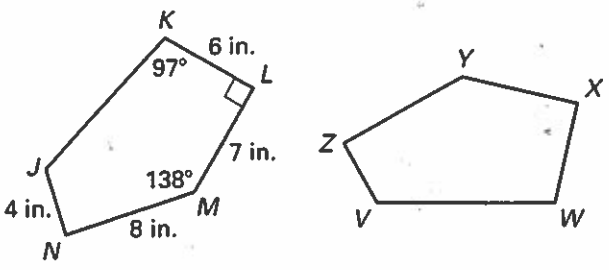
18. You are making almond milk. The recipe states that you need 4 parts water for every 1 part almonds. You used 16 cups of water and 2 bags of almonds. How many cups of almonds are in each bag?

Given $JKLMN \cong VWXYZ$, find the indicated measure.

19. $m\angle Y$

20. $m\angle X$

21. YZ



Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____

CHAPTER 6 Continued

Name _____ Date _____

Chapter Test C

For use after Chapter 6

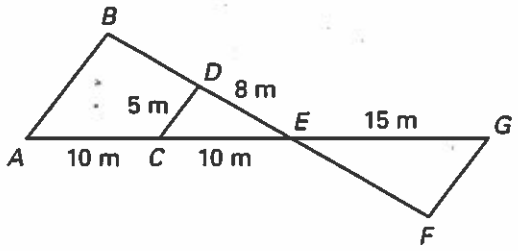
Given $\triangle ABE$, $\triangle CDE$, and $\triangle GFE$ are all similar, find the indicated measure.

22. AB

23. FG

24. BE

25. EF



26. A cereal company sells their cereal in three different size boxes. All three boxes are similar. Box A has a height of 12 inches, a width of 8 inches, and a depth of 4 inches. Box B has a height of 10 inches, and Box C has a width of 6 inches. What are the dimensions of Box B and Box C?

A map has a scale of 1 inch : $2\frac{1}{2}$ miles. Use the given map distance to find the actual distance.

27. 5 in. **28.** $12\frac{1}{2}$ in. **29.** $\frac{1}{8}$ in. **30.** $3\frac{3}{4}$ in.

A map has a scale of 1 centimeter : 150 kilometers. Use the given actual distance to find the distance on the map.

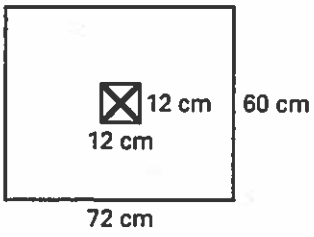
31. 180 km **32.** 75 km **33.** 1575 km **34.** 30 km

In Exercises 35–37, use the following information. At a carnival, you are playing a game in which you throw a dart at the rectangular board shown. You must throw the dart into the square region marked with the "X" to win a prize. The dart has an equal likelihood of landing at any point on the rectangular board.

35. What is the probability that you win a prize?

36. What are the odds in favor of you winning a prize?

37. About how many times would you expect to throw the dart to win two prizes?



In Exercises 38 and 39, use the following information. You roll a 6-sided number cube and a 10-sided number decahedron.

38. How many different possible outcomes are there for the pairs of numbers rolled?

39. What is the probability that you roll the same number on the cube and the decahedron?

Answers

22. _____

23. _____

24. _____

25. _____

26. _____

_____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

38. _____

39. _____