Name KEY Class _____ Date _____

Chapter Test — Form B

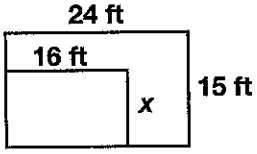
Chapter 4

Solve each proportion.

1. $\frac{3}{a} = \frac{6}{27}$ 13.5
2. $\frac{2.4}{8} = \frac{x}{6}$ 1.8
3. $\frac{z}{24} = \frac{3}{10}$ 7.2
4. $\frac{4}{7} = \frac{14}{x}$ 24.5
5. $-\frac{5}{p} = -\frac{6}{12}$ 10
6. $\frac{m}{3} = \frac{2}{11}$ 0.55
7. $\frac{2}{x} = \frac{8}{28}$ 7
8. $\frac{7}{15} = \frac{x}{50}$ 23.3

Write an equation and solve.

9. 45 is 75% of what number? 60
10. What is 62% of 70? 43.4
11. What percent of 60 is 25? 41.67%
12. 204 is what percent of 240? 85%
13. In second quarter of 2001, there were 72,455,000 workers, 16 and over, who were paid an hourly wage. Of this number, 39,865,000 earned $10 or more per hour. What percent earned $10 or more per hour? 55%
14. A teacher spent $235.20 on classroom supplies. This was 80% of the classroom budget. How much was the total budget? $294
15. The scale of a map is 1 in. : 35 mi. Determine the distance between two cities that are 2.4 in. apart on the map. 84 miles
16. The two rectangles are similar. Find the length of x.



10 feet

Find each percent of change. Describe each percent of change as an increase or decrease.

17. 50 in. to 60 in. +20%
18. 24 ft to 10 ft −58.3%
19. 35 cm to 28 cm −20%
20. In 1990, the average hourly wage of U.S. production workers was $10.01. In 2000, the average was $13.75. Find the percent of change. +37.4%
21. In 1940, the average number of deposits in U.S. banks totaled $67,494 million. In 2000, they totaled $4,914,808 million. Find the percent of change. +7182%

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Name _____ Class _____ Date _____

Chapter Test (continued) Form B

Chapter 4

22. Suppose the ratio of 16-year-olds to 15-year-olds on a soccer team must be $\frac{2}{5}$. If 10 of the players on the team are 15 years old, how many 16-year-olds can be on the team? 4 players

23. **Writing** Explain why the probability of an event must be less than or equal to one.

24. A coin is tossed four times. What is the probability of getting 4 heads in a row? $\frac{1}{16}$

25. You have a bag containing three red, seven green, and six blue pens. You choose two pens. Find each probability.

a. P(blue and blue) with replacing $\frac{9}{64}$

b. P(red then green) without replacing $\frac{7}{80}$

c. P(red and blue) with replacing $\frac{9}{128}$

d. P(blue then blue) without replacing $\frac{1}{8}$

Complete each statement.

26. \$6.69/3 lb = \$____ /lb \$2.23

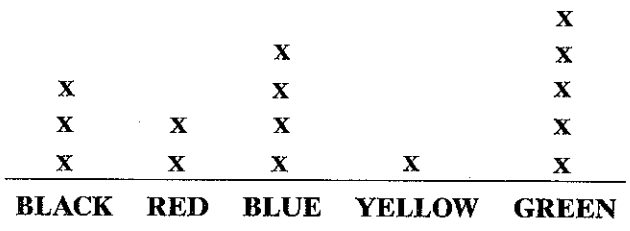
27. 5.5 lb/wk = ____ oz/d 12.57

28. 20 in./s = ____ ft/min 100

29. 55 m/min = ____ km/h 3.3

30. **Open-Ended** Write a probability problem involving independent events. Solve it using an equation.

Colored golf balls were selected at random from a box. Use the data in the line plot to find each probability.



31. P(red) $\frac{2}{15}$

32. P(blue or green) $\frac{3}{5}$

33. P(not black) $\frac{4}{5}$

34. The length of a piece of paper measures 27.8 cm. Find the percent error in this measurement. 0.18%

35. A 4-ft-tall fence post casts a 6-ft shadow. A pear tree next to the post casts a 40-ft shadow. How tall is the pear tree? 26.67 feet

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