

Algebra--Ch. 4 Review

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- _____ 1. A 16-oz bottle of water costs \$1.44. What is the cost per ounce?
 a. \$0.09/oz b. \$0.18/oz c. \$0.90/oz d. \$1.78/oz
- _____ 2. \$7.80/hour = _____ cents/minute?
 a. 13 b. 8.8 c. 780 d. 4.7

Solve the proportion.

_____ 3. $\frac{2}{10} = \frac{11}{x}$
 a. 55 b. 2.2 c. 110 d. 1.8

_____ 4. $\frac{x-8}{5} = \frac{2}{4}$
 a. $\frac{9}{2}$ b. $\frac{5}{2}$ c. $\frac{21}{2}$ d. 18

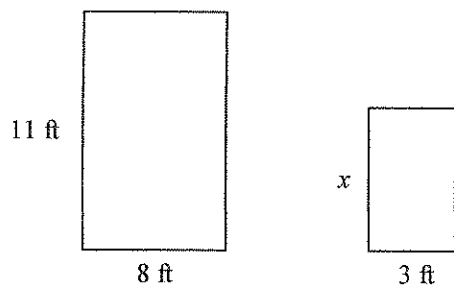
_____ 5. $\frac{w+14}{4w+6} = \frac{3}{4}$
 a. $\frac{8}{19}$ b. $\frac{15}{28}$ c. $\frac{4}{19}$ d. $\frac{2}{7}$

- _____ 6. A van travels 220 miles on 10 gallons of gas. Write and solve a proportion to find how many gallons the van needs to travel 550 miles.
 a. $\frac{220}{10} = \frac{550}{g}$; 31 gallons of gas c. $\frac{10}{220} = \frac{550}{g}$; 115 gallons of gas
 b. $\frac{10}{220} = \frac{550}{g}$; 121 gallons of gas d. $\frac{220}{10} = \frac{550}{g}$; 25 gallons of gas

- _____ 7. School guidelines require that there must be at least 2 chaperones for every 25 students going on a school trip. How many chaperones must there be for 80 students?
 a. 6 chaperones c. 3 chaperones
 b. 40 chaperones d. 7 chaperones

The pair of figures is similar. Find x . Round to the nearest tenth if necessary.

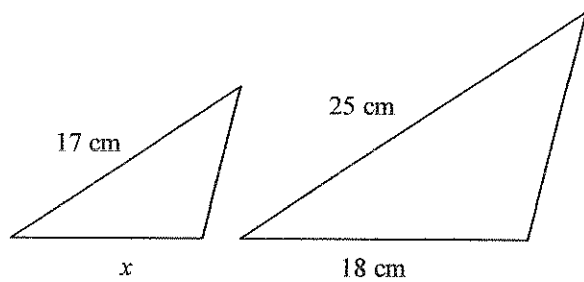
8.



Drawing not to scale

- a. 4.1 ft b. 2.2 ft c. 0.3 ft d. 2.7 ft

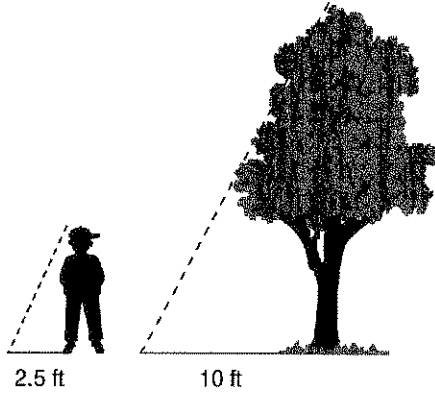
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Drawing not to scale

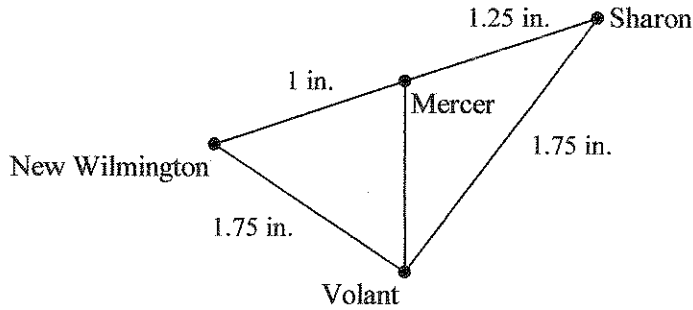
- a. 12.2 cm b. 19.1 cm c. 26.5 cm d. 26 cm

10. A tree casts a shadow 10 ft long. A boy standing next to the tree casts a shadow 2.5 ft. long. The triangle shown for the tree and its shadow is similar to the triangle shown for the boy and his shadow. If the boy is 5 ft. tall, how tall is the tree?



Drawing not to scale

- a. 18 ft b. 12.5 ft c. 15 ft d. 20 ft
11. Use the scale and map measurements to find the actual distance from New Wilmington to Sharon through Mercer. What is the actual distance if you travel from New Wilmington to Sharon through Volant?



Scale 1 in. : 12 mi

- a. 27 mi; 42 mi c. 13.5 mi; 21 mi
b. 40.5 mi; 63 mi d. 54 mi; 84 mi
12. What percent of 20 is 18?
a. 11.1% b. 9% c. 90% d. 49.5%
13. 60% of 60 is what number?
a. 18 b. 4 c. 36 d. 9
14. 30% of what number is 42?
a. 210 b. 105 c. 140 d. 14
15. Susan earns a 5% commission on her computer sales. If she earned a \$81.04 commission on a sale of a new system, what was the price of the system?
a. \$1134.56 b. \$810.40 c. \$162.08 d. \$1620.80

- _____ 16. Use the formula for simple interest, $I = prt$. Find p if $I = \$313.42$, $r = 2.5\%$, and $t = 3$ yr.
 a. \$3,426.73 b. \$4,429.67 c. \$3,761.04 d. \$4,178.93
- _____ 17. During the month of February, Fabulous Feet Shoe Mart sold 50 pairs of red loafers. After an ad campaign to boost sales, they sold 60 pairs in March. Find the percent of increase in sales.
 a. 12% b. 20% c. 15% d. 23%
- _____ 18. You measure the width of a doorway and find that it is 0.93 m wide. Find the greatest possible error of your measurement.
 a. 0.05 m b. 0.005 m c. 0.01 m d. 0.001 m
- _____ 19. You measure a piece of rope and find its length to be 13 m. Find the percent error of this measurement. Round to the nearest hundredth.
 a. 0.92% b. 3.85% c. 0.38% d. 0.15%
- _____ 20. Find the minimum and maximum possible areas of a rectangle measuring 2 km by 5 km.
 a. minimum area: 13.75 km²
 maximum area 6.75 km²
 b. minimum area: 6.75 km²
 maximum area 13.75 km²
 c. minimum area: 10 km²
 maximum area 13.75 km²
 d. minimum area: 6.75 km²
 maximum area 10 km²
- _____ 21. You roll a standard number cube. Find $P(\text{number greater than } 1)$
 a. $\frac{6}{5}$ b. $\frac{5}{6}$ c. $\frac{1}{6}$ d. 1
- _____ 22. In a batch of 960 calculators, 8 were found to be defective. What is the probability that a calculator chosen at random will be defective? Write the probability as a percent. Round to the nearest tenth of a percent if necessary.
 a. 74.4% b. 0.8% c. 99.2% d. 1.1%
- _____ 23. A cell phone company orders 500 new phones from a manufacturer. If the probability of a phone being defective is 2.6%, predict how many of the phones are likely to be defective. Round to the nearest whole number.
 a. 16 phones b. 13 phones c. 11 phones d. 130 phones
- _____ 24. Suppose you choose a marble from a bag containing 2 red marbles, 5 white marbles, and 3 blue marbles. You return the first marble to the bag and then choose again. Find $P(\text{red and blue})$.
 a. $\frac{3}{5}$ b. $\frac{7}{10}$ c. $\frac{1}{2}$ d. $\frac{3}{50}$
- _____ 25. A basket contains 11 pieces of fruit: 4 apples, 5 oranges, and 2 bananas. Jonas takes a piece of fruit at random from the basket, and then Beth takes a piece at random. What is the probability that Jonas will get an orange and Beth will get an apple?
 a. $\frac{9}{10}$ b. $\frac{9}{11}$ c. $\frac{20}{121}$ d. $\frac{2}{11}$