

**Chapter 3**  
**Form F**

Choose the correct answer.

1. A certain amount of money is deposited in a savings account that pays 3.5% interest. At the end of the first year, the account earns \$200.20 in interest. How much was deposited at the start of the year?  
a. \$57.20                      b. \$5720                      c. \$572                      d. \$700.70
2. A bank loans out \$240,000, part of it at the rate of 7% annual mortgage interest and the rest at the rate of 16% annual credit card rate. The interest received on both loans totals \$21,750. How much was loaned at 7% interest?  
a. \$55,000                      b. \$180,000                      c. \$185,000                      d. \$60,000
3. A mixture is made by combining 12 ounces of vinegar and enough water to make a 45% vinegar solution. Find the quantity of water needed to make such a solution.  
a.  $\frac{44}{3}$  oz                      b. 5.4 oz                      c.  $\frac{80}{3}$  oz                      d. 24 oz
4. Two buses leave a station at the same time, traveling in opposite directions. The rate of the slower bus is 15 miles per hour less than the rate of the faster bus. After 4 hours, they are 492 miles apart. What is the rate of the slower bus?  
a. 84 mph                      b. 54 mph                      c. 69 mph                      d. 39 mph
5. If there are 12 popsicles in a 64 oz. box, how many popsicles are in a 96 oz. box?  
a. 6                      b. 24                      c. 18                      d. 12
6. Solve the proportion:  $\frac{75}{15} = \frac{x}{75}$   
a. 225                      b. 625                      c. 125                      d. 375
7. Sarah sold 52 tickets to the school play and Ralph sold 8 tickets. What is the ratio of the number of tickets Sarah sold to the total number of tickets sold by Ralph and Sarah.  
a.  $\frac{13}{2}$                       b.  $\frac{2}{15}$                       c.  $\frac{8}{15}$                       d.  $\frac{13}{15}$
8. Solve the proportion:  $\frac{x}{24} = \frac{10}{16}$   
a. 15                      b. -15                      c. 20                      d. -20

Name \_\_\_\_\_

Date \_\_\_\_\_

9. Solve the proportion:  $\frac{x}{18} = \frac{x+4}{15}$

a. -24

b.  $\frac{4}{3}$

c.  $-\frac{4}{3}$

d. 24

10. At an Australian animal preserve, rangers catch, tag, and release 100 kangaroos. A month later, they catch 75 kangaroos, of which 6 are tagged. Assuming that the ratio of tagged kangaroos in the sample holds for all the kangaroos in the preserve, how many kangaroos are in the preserve?

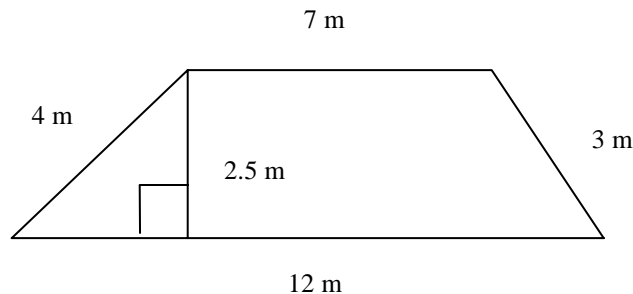
a. 40

b. 1250

c. 400

d. 7500

For problems 11 and 12, use the figure below.



11. Find the area of the above figure.

a.  $26 \text{ m}^2$

b.  $15 \text{ m}^2$

c.  $23.75 \text{ m}^2$

d.  $28.5 \text{ m}^2$

12. Find the perimeter of the above figure.

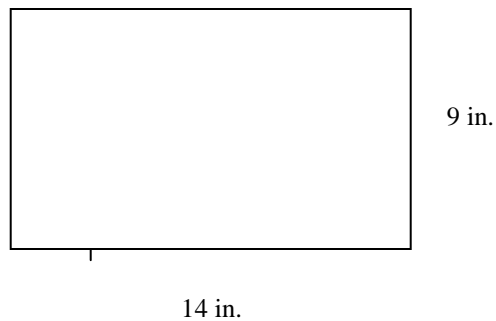
a. 31 m

b. 28.5 m

c. 23.5 m

d. 26 m

13. Find the perimeter of the figure below.



a. 126 in

b. 23 in

c. 63 in

d. 46 in

14. A sailboat has a triangular sail with an area of 128 square feet and a height of 16 feet. Find the base of the sail.

a. 4 ft

b. 8 ft

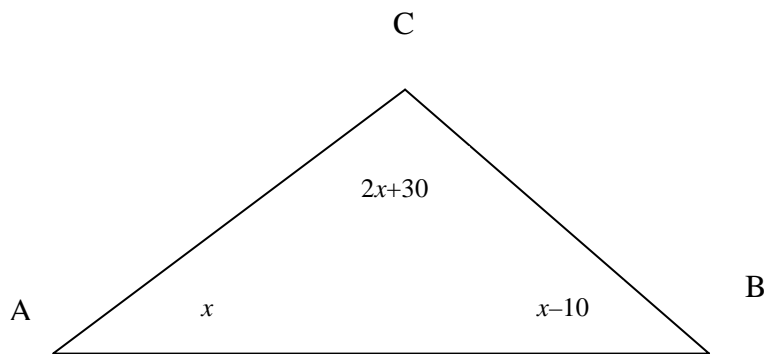
c. 2 ft

d. 16 ft

Name \_\_\_\_\_

Date \_\_\_\_\_

15. What will it cost to cover a rectangular ceiling measuring 10 feet by 12 feet with rectangular ceiling tiles that measure 3 feet by 4 feet if a package of 5 tiles costs \$32 per package?  
a. \$320                      b. \$160                      c. \$64                      d. \$128
16. Find the diameter of a circle with a circumference of  $32\pi$  inches.  
a. 32 in                      b. 64 in                      c. 8 in                      d. 16 in
17. A cylinder whose radius is 2 feet and whose height is 5 feet has its radius tripled. How many times greater is the volume of the larger cylinder than the smaller cylinder?  
a. 9                      b. 6                      c. 3                      d. 15
18. Find the measure of the largest angle shown in the figure below.



- a.  $40^\circ$                       b.  $50^\circ$                       c.  $110^\circ$                       d.  $30^\circ$
19. Find the measure of the supplement of a  $42^\circ$  angle.  
a.  $318^\circ$                       b.  $138^\circ$                       c.  $48^\circ$                       d.  $21^\circ$
20. How many degrees are there in an angle that measures  $18^\circ$  more than its supplement?  
a.  $99^\circ$                       b.  $81^\circ$                       c.  $182^\circ$                       d.  $63^\circ$