NAME_____**DATE**_____**PER.**_____

CHANGING DIMENSIONS

Describe the effect of each change on the area of the given figure.

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|---|
| 1. The diagonals of a rhombus are both multiplied by 8. |
| 2. The base of a rectangle is multiplied by 4 and the height is multiplied by 7. |
| 3. The diagonal of a square is divided by 4. |
| 4. One diagonal of a kite is multiplied by $\frac{1}{7}$. |
| 5. The perimeter of an equilateral triangle is doubled. |
| 6. A trapezoid has bases that are 24 cm and 42 cm and a height of 15 cm. Describe the effect on the area if the length of both bases is doubled. |
| 7. A trapezoid has bases that are 24 cm and 42 cm and a height of 15 cm. Describe the effect on the area if the length of both bases and the height are doubled. |

8. Describe the effect of the change on the area of the given triangle:

    The height of the triangle with vertices at A(5, 2), B(2, 3), and C(5, 4) is multiplied by 4 and the base is multiplied by 2.
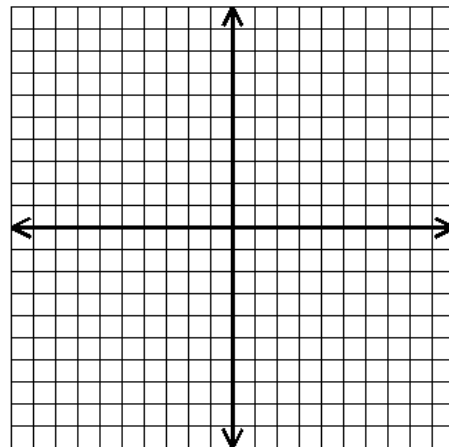
9. Which of the following describes the effect on the area of a square when the side length is doubled?

    A. The area remains constant.

    B. The area is reduced by a factor of $\frac{1}{2}$.

    C. The area is doubled.

    D. The area is increased by a factor of 4.

10. Vas and Lori built rectangular play areas for their dogs. The play area for Lori's dog is 1.5 times as long and 1.5 times as wide as the play area for Vas' dog. If the play area for Vas' dog is 60 square feet, how big is the play area for Lori's dog?
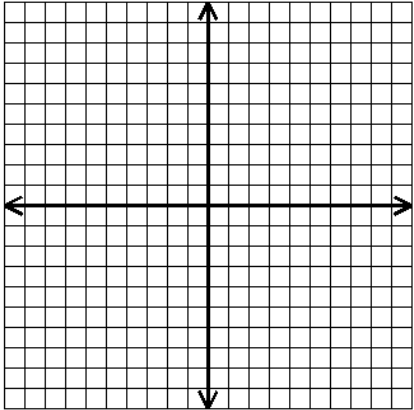
    A. 40 ft^2 C. 135 ft^2
    B. 90 ft^2 D. 240 ft^2

11. Suppose the dimensions of a triangle with a perimeter of 18 inches are doubled. Find the perimeter of the new triangle in inches.

Review

12. _____	If the two diagonals of a kite measure 16 centimeters and 10 centimeters, what is the area of the kite in square centimeters?

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13. _____	Find the area of △ABC with A(0, 3), B(5, 3), and C(2, -1).
14. _____	Find the sum of the measures of the interior angles of a convex heptagon.
15. _____	What is the largest angle in △ABC if AB = 3, BC = 6, and AC = 7?
16. _____	A support beam on a bridge has a slope of $\frac{7}{17}$. To the nearest degree, find the angle that the beam makes with a horizontal beam.
17. _____	The diagonals of rectangle QRST intersect at point P. If QR = 1.8 cm, QP = 1.5 cm, and QT = 2.4 cm, find the perimeter of △RST.
18. _____	Find the length of a rectangle with a width of 5 and a diagonal length of 10.