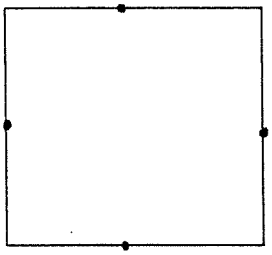
Geometry (Honors)
Chapter 8 review

Name _____

1. The diagonals of a rhombus are 30 and 16. Find the perimeter.

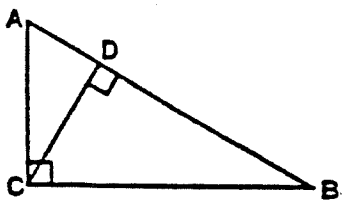
2. Each side of an equilateral triangle is 12. Find the altitude to one side.

3. The square shown has side length of 10 cm. Find the perimeter of the figure formed by joining the consecutive midpoints of the square.



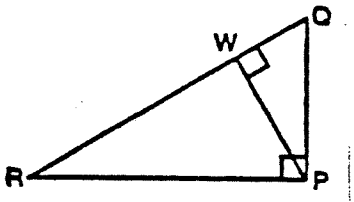
4. Given: AD = 4
BD = 8

Find CD.



5. Given: WQ = 4
WR = 8

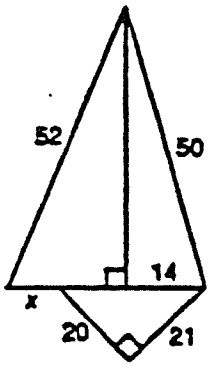
Find QP.



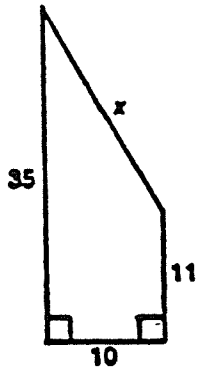
5. Find the length of the longest diagonal in a rectangular box that is 8 x 9 x 12.

6. Solve for x.

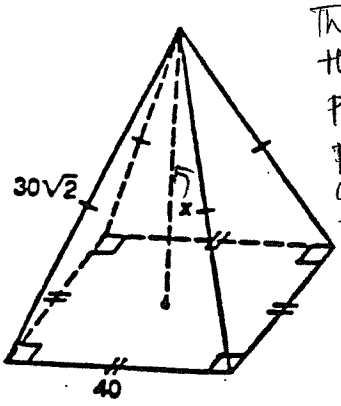
a.



b.

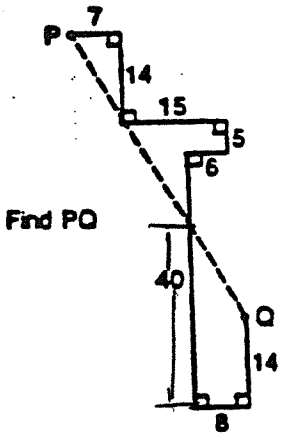


c.



The altitude of this square pyramid x passes through the intersection of the diagonals of the square base.

d.

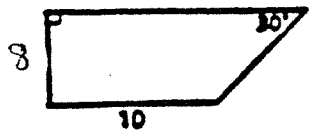


7. What is the ratio of the sides of the following triangles:

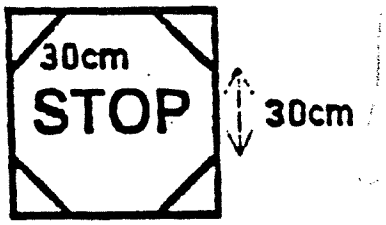
a. 45 – 45 – 90

b. 30 – 60 – 90

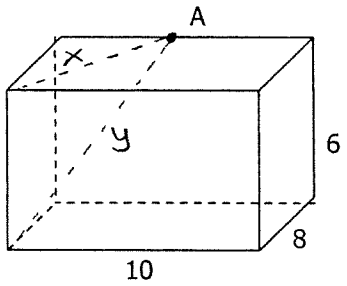
8. Find the perimeter of the trapezoid.



9. Find the dimensions of the square sheet of metal from which this regular octagonal stop sign was cut.



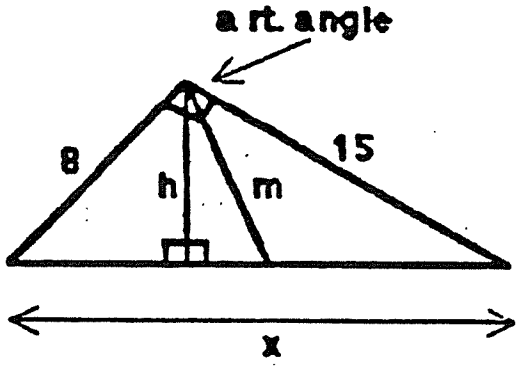
10. If point A is the midpoint of one edge, find lengths x and y.



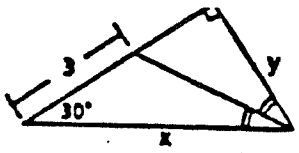
11. Would a triangle with the following lengths for its sides be right, obtuse, acute or impossible?

a. 6, 9, 3 b. $\sqrt{8}, \sqrt{3}, \sqrt{3}$ c. $\sqrt{5}, \sqrt{7}, \sqrt{3}$ d. 17x + 1, 15x, 8x + 1

12. Find the length of the altitude to the hypotenuse.



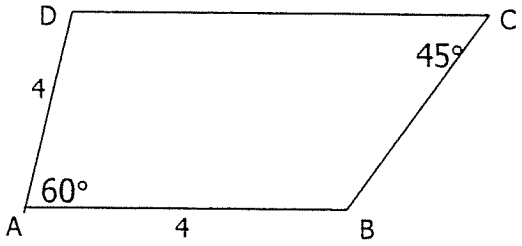
13. Find x and y.



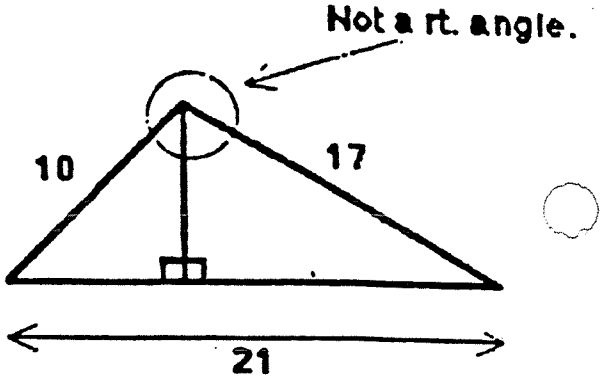
14. Find the legs of an isosceles trapezoid whose bases are 15 and 25 and whose height is 12.

15. The diagonals of a rhombus have a length ratio of 2:1. If the perimeter is 20, find the sum of the lengths of the diagonals.

16. ABCE is a trapezoid, $\overline{DC} \parallel \overline{AB}$. Find DC and BC.



17. Find the length of the altitude.



18. Find the length of the diagonals of a rhombus that has a perimeter of 40 cm and one interior angle of 60°.