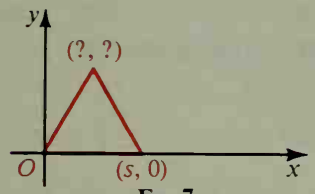
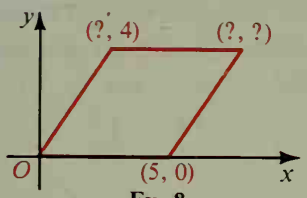
B **7.** An equilateral triangle is shown below. Express the missing coordinates in terms of s.



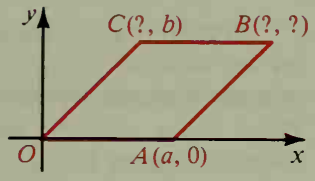
Ex. 7



Ex. 8

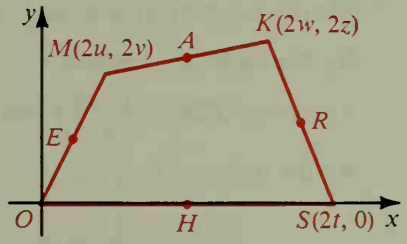
8. A rhombus is shown above. Find the missing coordinates.

9. Rhombus $OABC$ is shown at the right. Express the missing coordinates in terms of a and b. (*Hint*: See Exercise 8.)



10. Supply the missing coordinates to prove: The segments that join the midpoints of opposite sides of any quadrilateral bisect each other. Let H, E, A, and R be the midpoints of the sides of quadrilateral $SOMK$. Choose axes and coordinates as shown.

a. R has coordinates (__?__, __?__).
b. E has coordinates (__?__, __?__).
c. The midpoint of $\overline{RE}$ has coordinates (__?__, __?__).
d. A has coordinates (__?__, __?__).
e. H has coordinates (__?__, __?__).
f. The midpoint of $\overline{AH}$ has coordinates (__?__, __?__).
g. Because (__?__, __?__) is the midpoint of both $\overline{RE}$ and $\overline{AH}$, $\overline{RE}$ and $\overline{AH}$ bisect each other.



Draw the figure named. Select axes and label the coordinates of the vertices in terms of a single letter.

C **11.** a regular hexagon

12. a regular octagon

13. Given isosceles trapezoid $HOJK$ and the axes and coordinates shown, use the definition of an isosceles trapezoid to prove that $e = c$ and $d = a - b$.