

# Practice 6-6

## Placing Figures in the Coordinate Plane

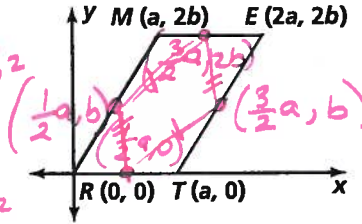
Find the coordinates of the midpoint of each segment and find the length of each segment.

1.  $\overline{ME} = a$

2.  $\overline{ET} = \sqrt{(2a-a)^2 + (2b-0)^2} = \sqrt{a^2 + 4b^2}$

3.  $\overline{TR} = a$

4.  $\overline{RM} = \sqrt{(0-a)^2 + (0-2b)^2} = \sqrt{a^2 + 4b^2}$



Find the slope of each segment.

5.  $\overline{DI} = 0$

6.  $\overline{IR} = \frac{0-a}{2a-3a} = \frac{-a}{-a} = 1$

7.  $\overline{RE} = \frac{2a-a}{a-3a} = \frac{a}{-2a} = -\frac{1}{2}$

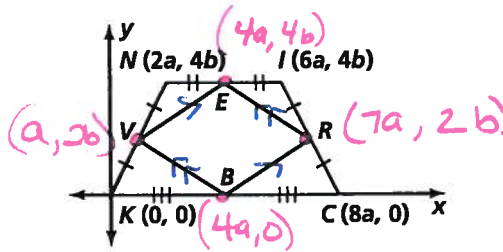
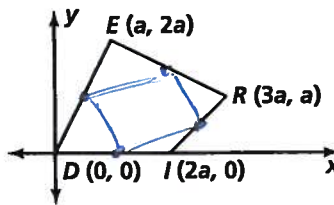
8.  $\overline{DE} = \frac{2a-0}{a-0} = \frac{2a}{a} = 2$

9.  $\overline{VE} = \frac{2b-4b}{a-4a} = \frac{-2b}{-3a} = \frac{2b}{3a}$

10.  $\overline{ER} = \frac{4b-2b}{4a-7a} = \frac{2b}{-3a} = -\frac{2b}{3a}$

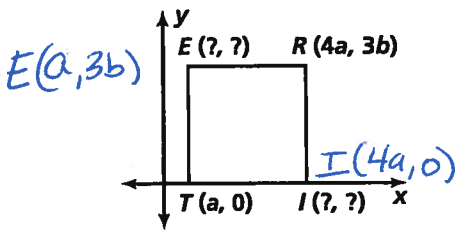
11.  $\overline{RB} = \frac{2b-0}{7a-4a} = \frac{2b}{3a}$

12.  $\overline{VB} = \frac{0-2b}{4a-a} = \frac{-2b}{3a}$

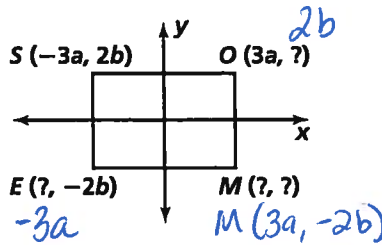


Use the properties of each figure to find the missing coordinates.

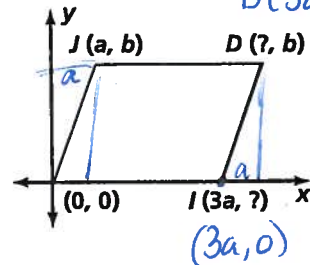
13. square



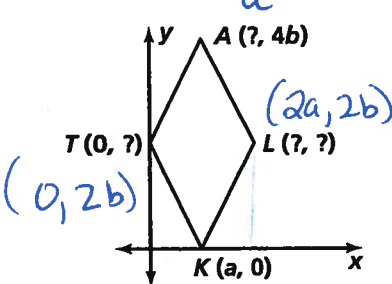
14. rectangle



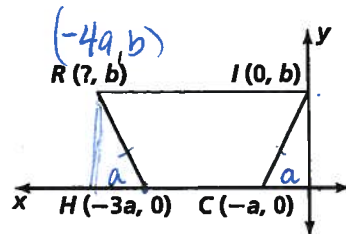
15. parallelogram



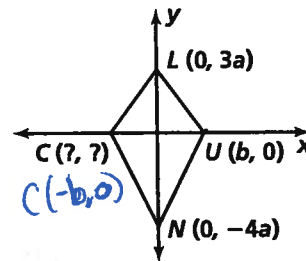
16. rhombus



17. isosceles trapezoid



18. kite



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