

Mathematics

Forming shapes from midpoints

Downloadable resource

Lesson 5 of 8

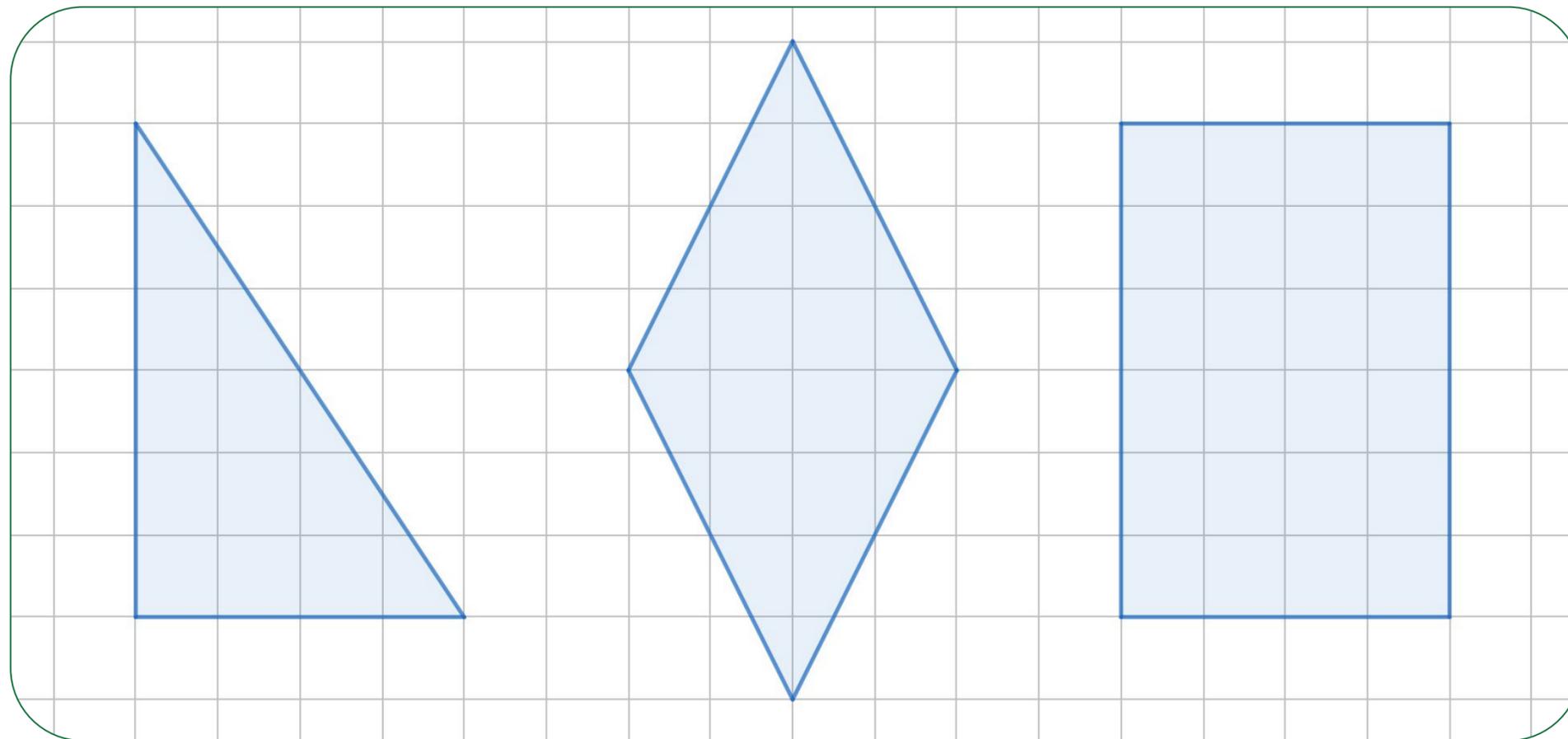
Dr Rim Saada



Try this

Find the midpoints of the sides of these shapes.

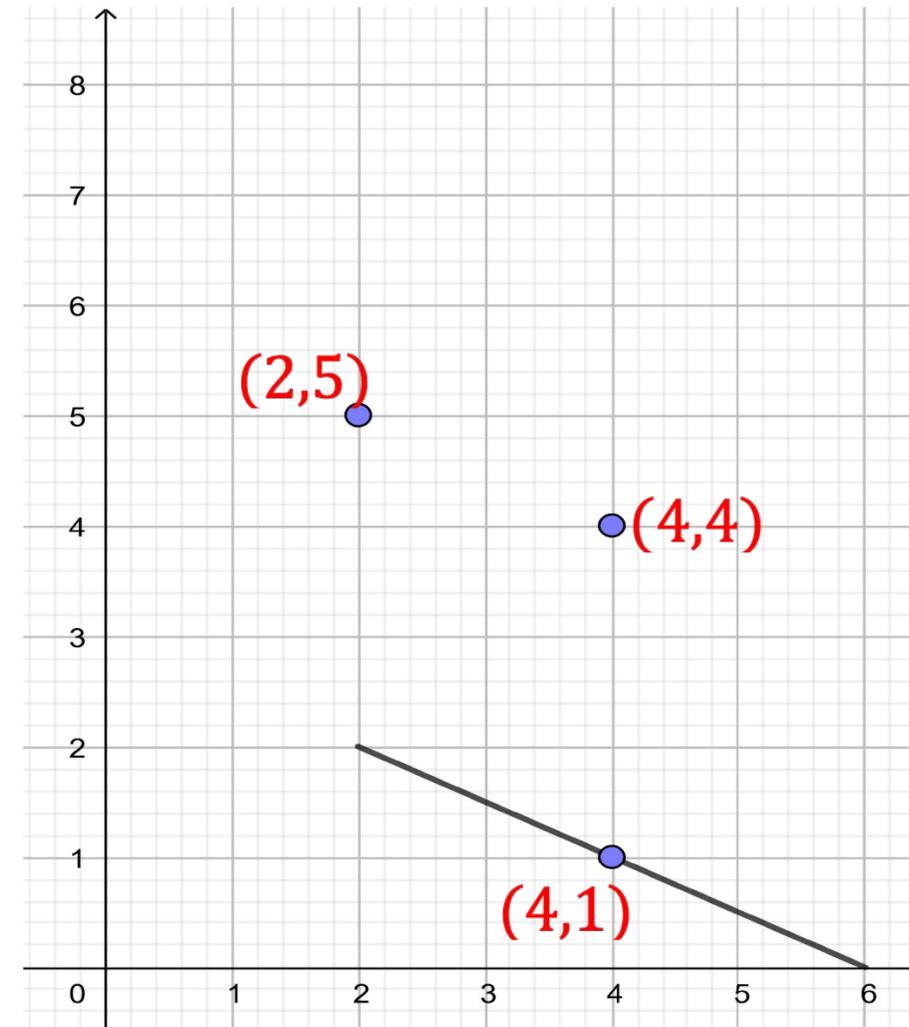
Join the midpoints to form new shapes.



Independent task

1) The midpoint of one side of a triangle is at $(4,1)$ and that side is shown. What are the coordinates of the vertices of the triangle?

2) A kite with vertices at $(0,3)$, $(6,1)$, $(6,5)$ and $(8,3)$. What shape is formed by joining the midpoints of the sides of the kite? What are the coordinates of its vertices?



Explore

Draw the shapes described below.

A rectangle with vertices $(4, 1)$, $(4, 7)$, $(2, 7)$, $(2, 1)$

A triangle with vertices $(-3, 1)$, $(-3, -3)$, $(1, -1)$

A kite with vertices $(-4, 8)$, $(-6, 6)$, $(-4, 0)$, $(-2, 6)$

A rhombus with vertices $(-2, -5)$, $(2, -3)$, $(6, -5)$, $(2, -7)$

