

Mathematics

# Shading regions to satisfy a set of inequalities

## Independent Task

Ms Jones



# Try this

**Sketch** the following lines.

$$y = 2$$

$$x = -3$$

$$x + y = 5$$

What shape is bound by the three lines?

Can you create another set of lines to create the same shape in a different position?



# Independent task

1. Draw the following inequalities on a set of axes:

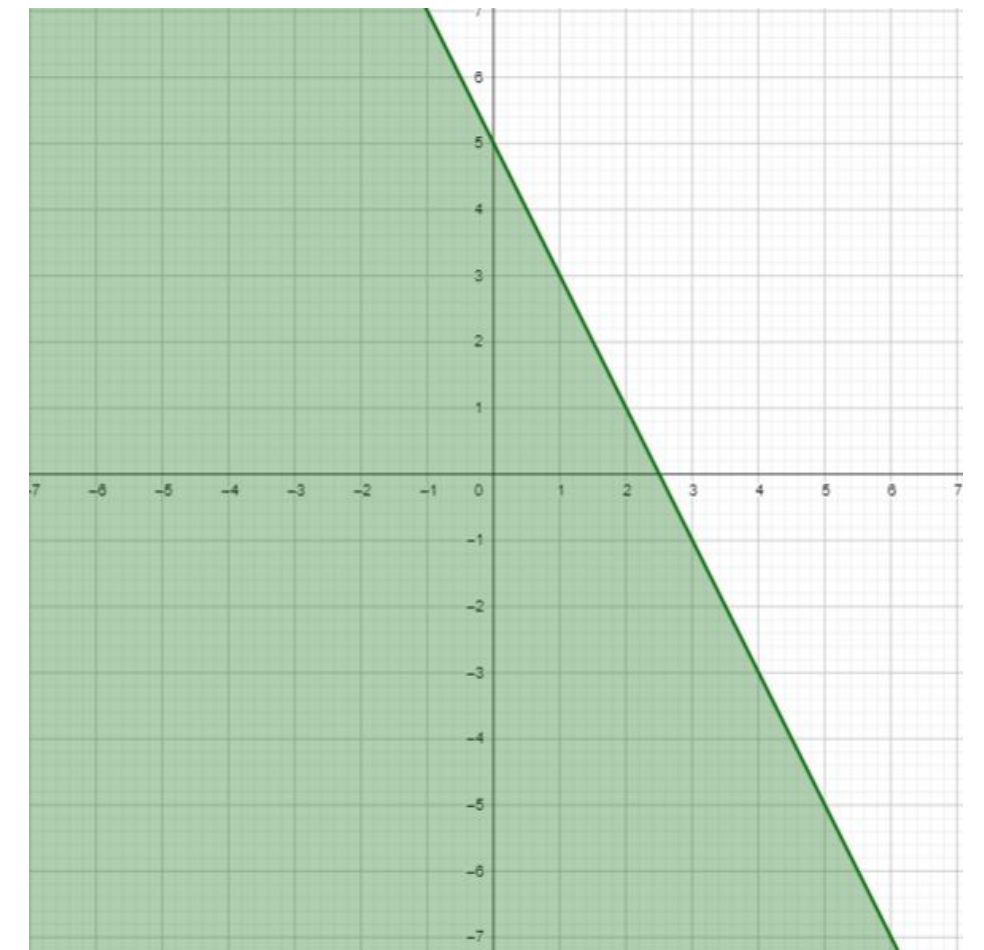
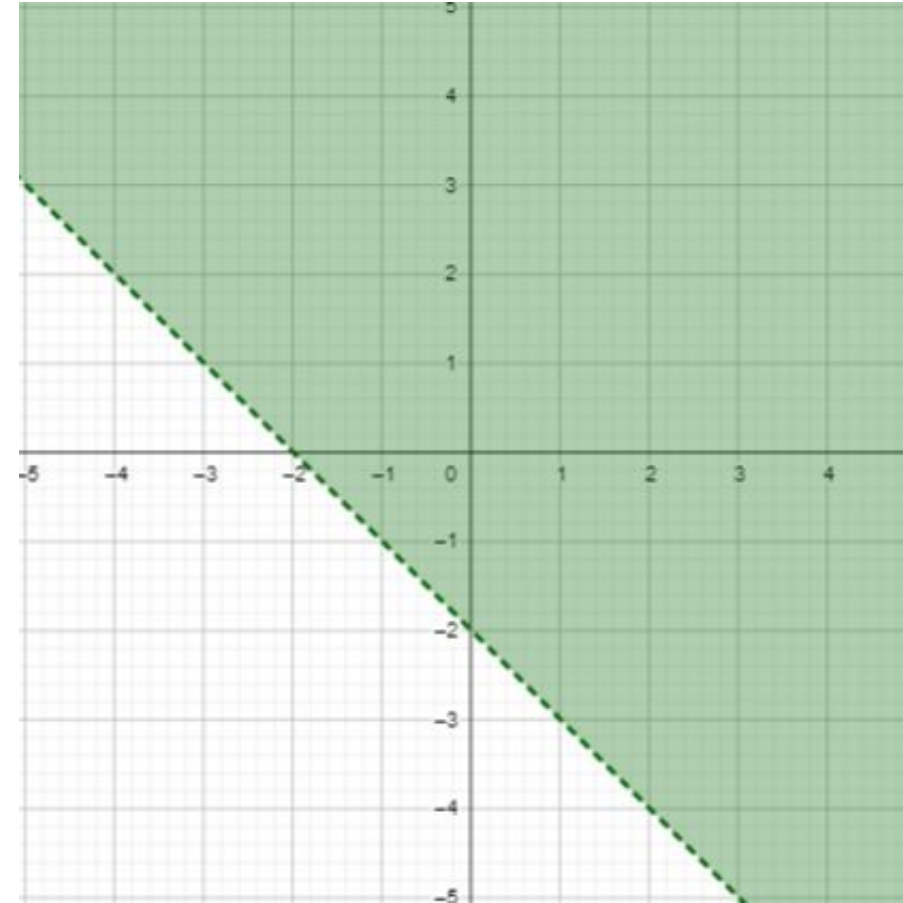
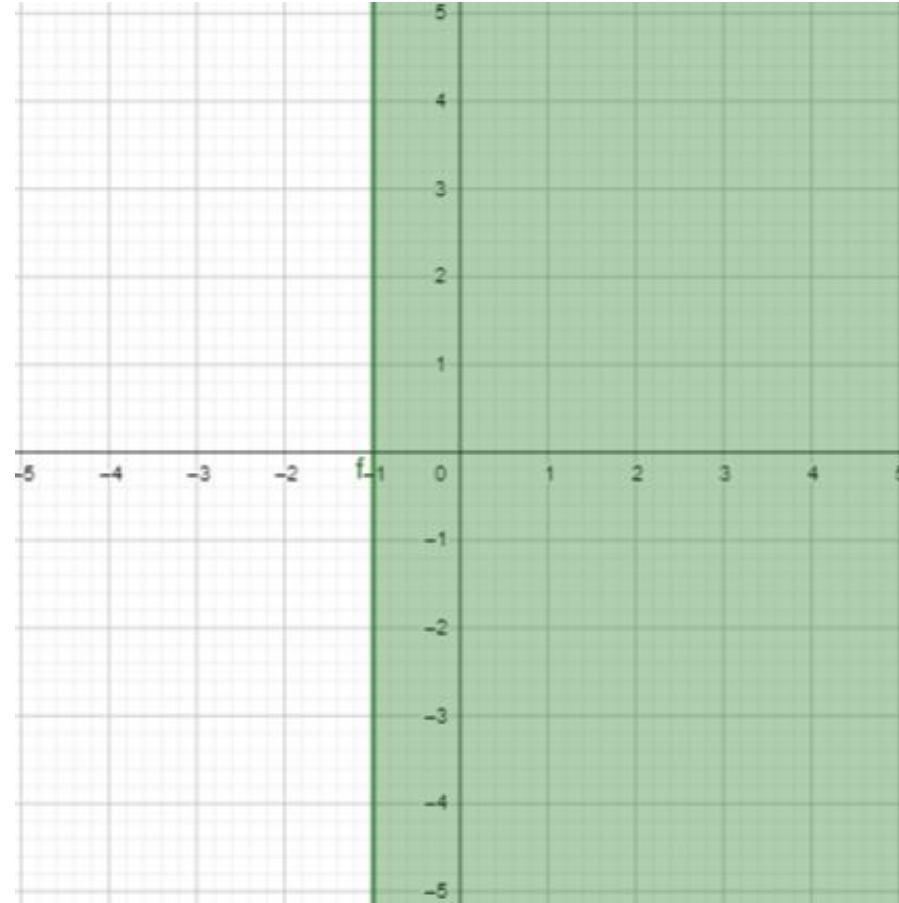
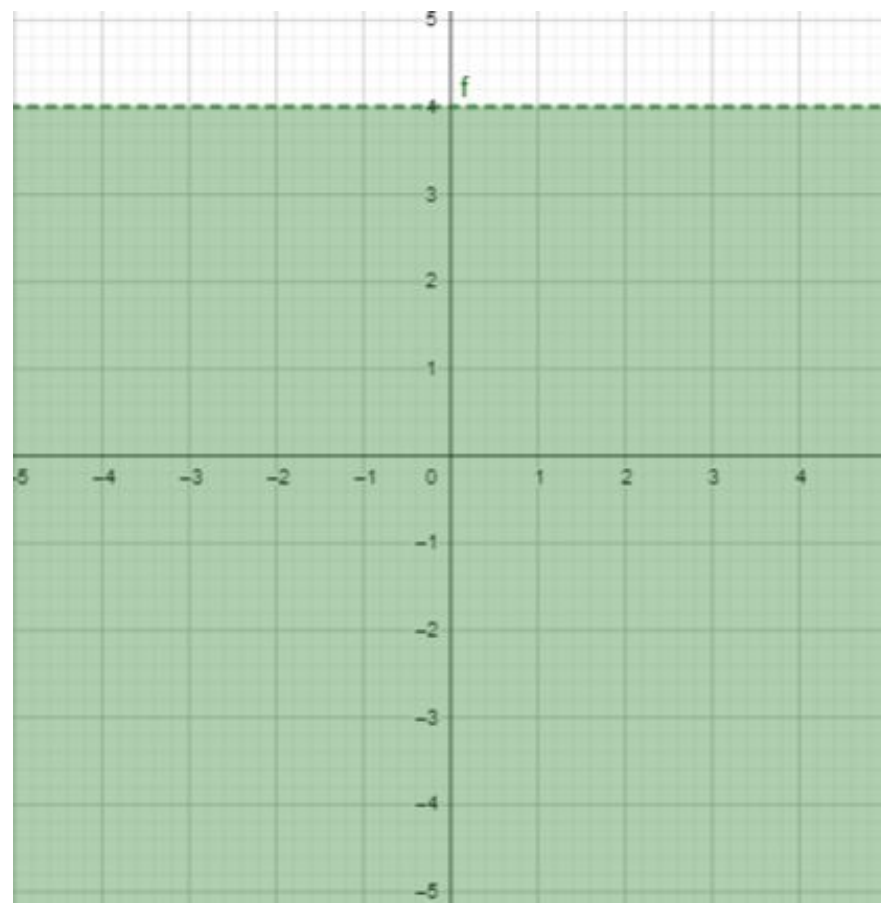
$$x \geq -1$$

$$x + y > 2$$

$$y \leq 6$$

$$y - x < 1$$

2. What inequalities are drawn on the following graphs:



# Explore

Can you create sets of inequalities to form the following shapes:

- A rectangle
- A triangle
- A trapezium
- A parallelogram

What other shapes can you make?

