

12. (a) Sketch the graph with equation

$$y = |px - q|$$

where p and q are **positive** constants.

State, on your sketch, the coordinates of all points where the graph meets or cuts the coordinate axes.

(3)

The curve C has equation

$$y = \frac{k}{x}$$

where k is a **positive** constant.

Given that C intersects the graph with equation $y = |px - q|$ at 3 distinct points,

(b) find, in terms of p and q , the range of values of k .

(4)