

The diagram shows a trapezium ABCD in which BC is parallel to AD and angle $BCD = 90^{\circ}$. The coordinates of A, B and D are (2, 0), (4, 6) and (12, 5) respectively.

(i) Find the equations of
$$BC$$
 and CD . [5]

(ii) Calculate the coordinates of
$$C$$
. [2]