6 Solutions by accurate drawing will not be accepted.

The points A and B have coordinates $(-2, 4)$ and $(6, 10)$ respectively.

(a) Find the equation of the perpendicular bisector of the line AB, giving your answer in the form $ax + by + c = 0$, where a, b and c are integers. [4]

The point C has coordinates $(5, p)$ and lies on the perpendicular bisector of AB.

(b) Find the value of p. [1]

It is given that the line AB bisects the line CD.

(c) Find the coordinates of D. [2]

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