

- 6 The point  $A$  has coordinates  $(5, 4)$  and the point  $B$  has coordinates  $(-7, -1)$

The point  $C$  is such that  $\overrightarrow{BC} = \begin{pmatrix} 3 \\ 4 \end{pmatrix}$

- (a) Find the coordinates of the point  $C$ .

(2)

The point  $D$  is such that  $ABCD$  is a parallelogram with diagonals  $AC$  and  $BD$ .

The length of  $BC$  is 5 cm.

- (b) Find the area, in  $\text{cm}^2$ , of the parallelogram  $ABCD$ .

(5)

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$$\left[ \begin{array}{l} \text{Cosine rule : } a^2 = b^2 + c^2 - 2bc \cos A \\ \text{Area of triangle} = \frac{1}{2} ab \sin C \end{array} \right]$$



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**Question 6 continued**

Handwriting practice area with horizontal dotted lines.

**(Total for Question 6 is 7 marks)**

