

10

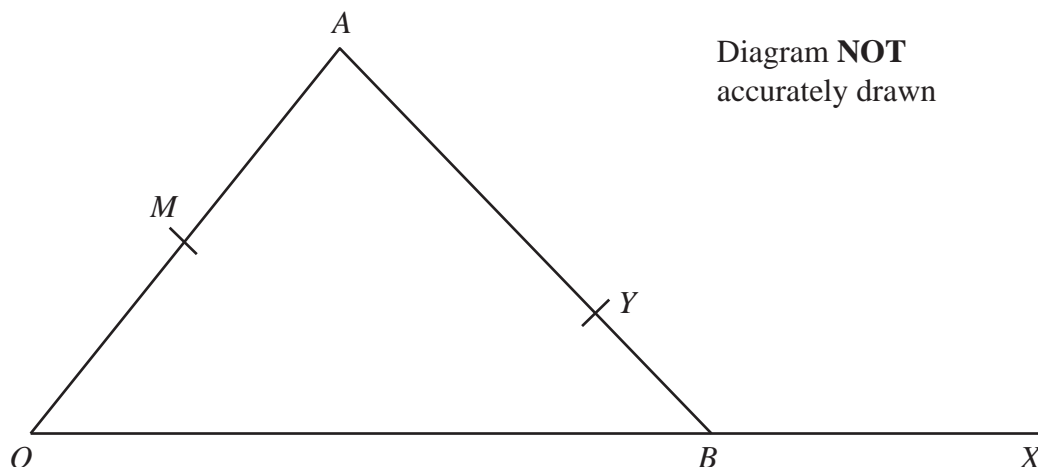


Figure 5

In Figure 5, $\vec{OA} = 2\mathbf{a}$, $\vec{OB} = 4\mathbf{b}$ and M is the midpoint of OA .

The point Y lies on AB such that $AY : YB = 3 : 1$

The point X lies on OB produced.

(a) Find as simplified expressions in terms of \mathbf{a} and \mathbf{b}

- (i) \vec{AB} (ii) \vec{MY}

(3)

The points M , Y and X are collinear.

(b) Find the ratio $OB : OX$

(5)

(c) Find the ratio of $(\text{Area } \triangle YBX) : (\text{Area } \triangle OAX)$

(3)

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Question 10 continued

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Question 10 continued

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(Total for Question 10 is 11 marks)

TOTAL FOR PAPER IS 100 MARKS