10

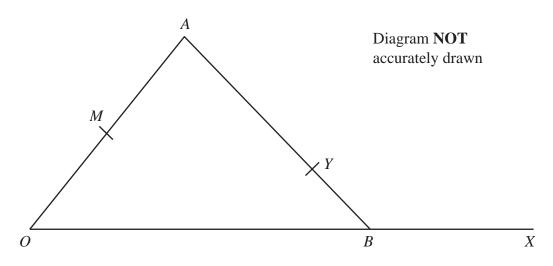


Figure 5

In Figure 5, $\overrightarrow{OA} = 2\mathbf{a}$, $\overrightarrow{OB} = 4\mathbf{b}$ 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 ${\bf a}$ and ${\bf b}$
 - (i) *AB*
- (ii) MY

(3)

The points M, Y and X are collinear.

(b) Find the ratio OB : OX

(5)

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

(3)



$\times\!\!\times\!\!\times$
$\times\!\!\times\!\!\times$

(4)
REA
X 2 X
THISA
$\times\!$
Z
X X
RITE
00
\times
3
NOT
(A)
00
∞
$\times\!\!\times\!\!\times$
$>\!\!>\!\!>$
$\times\!\!\times\!\!\times$
>>>>
>>>>
$\times\!\!\times\!\!\times$
>>>>
>>>>
$\times\!\!\times\!\!\times$
$\times\!\!\times\!\!\times$
>>>>
>>>>
>>>>
$\times\!\!\times\!\!\times$
$\times\!\!\times\!\!\times\!\!\times$
$\times\!\!\times\!\!\times\!\!\times$
◁
ARE
\times
THIS
Z
X
R T
WRITE
NOTW
NOTW
NOTW
NOTW
NOTW
DONOTW
A DO NOT W
A DO NOT W
EA DO NOT W
REA DO NOT W
AREA DO NOT W
AREA DO NOT W
S AREA DO NOT W
S AREA DO NOT W
HIS AREA DO NOT W
HIS AREA DO NOT W
THIS AREA DO NOT W
THIS AREA DO NOT W
IN THIS AREA DO NOT W
E IN THIS AREA DO NOT W
E IN THIS AREA DO NOT W
E IN THIS AREA DO NOT W
E IN THIS AREA DO NOT W
RITE IN THIS AREA DO NOT W
RITE IN THIS AREA DO NOT W
WRITE IN THIS AREA DO NOT W
WRITE IN THIS AREA DO NOT W
WRITE IN THIS AREA DO NOT W
WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W
NOT WRITE IN THIS AREA DO NOT W

Question 10 continued	



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Question 10 continued							
	(Total for Question 10 is 11 marks)						
	TOTAL FOR PAPER IS 100 MARKS						

