19

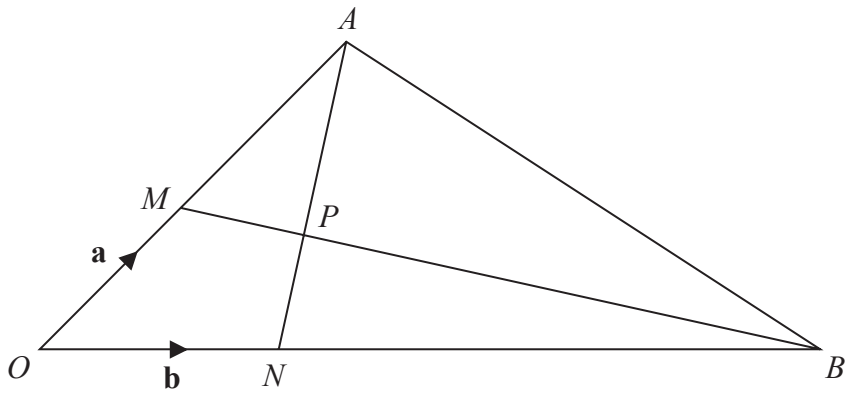


Diagram **NOT** accurately drawn

OMA, *ONB*, *MPB* and *NPA* are straight lines.

M is the midpoint of *OA*

$ON : NB = 1 : 5$

$\overrightarrow{OM} = \mathbf{a}$ $\overrightarrow{ON} = \mathbf{b}$

(a) Find in terms of **a** and **b** the vector $\overrightarrow{AN}$

.....

(1)

(b) Use a vector method to find the ratio $AP : PN$

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$AP : PN =$ .....

(4)

(Total for Question 19 is 5 marks)

Turn over for Question 20

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