



- (b) (i) Describe how the directions of the invariant lines of the transformation represented by  $M$  are related to each other.

Fully justify your answer.

[2 marks]

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- (b) (ii) Describe fully the transformation represented by  $M$

[2 marks]

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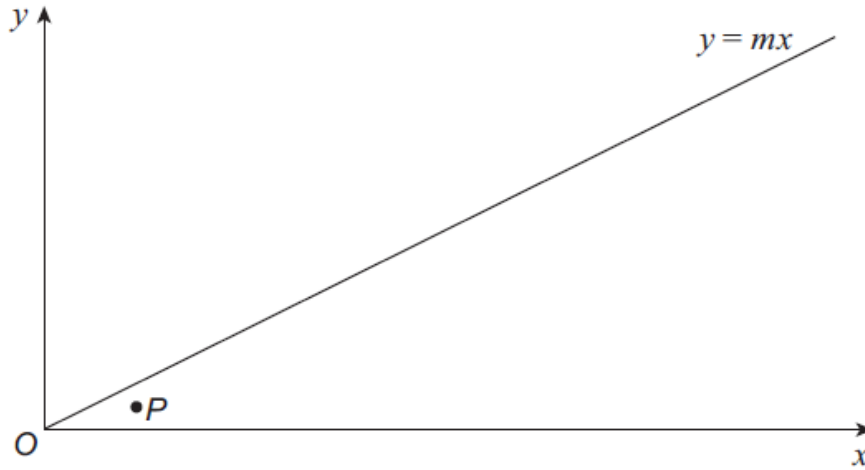


(c) (i) The diagram below shows a point  $P$  and the line  $y = mx$

Draw four lines on the diagram to demonstrate the result proved in part (b).

Label as  $P'$  the image of  $P$  under the transformation represented by  $(BA)^2$

[2 marks]



(c) (ii) Explain how your completed diagram shows the result proved in part (b).

[2 marks]

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