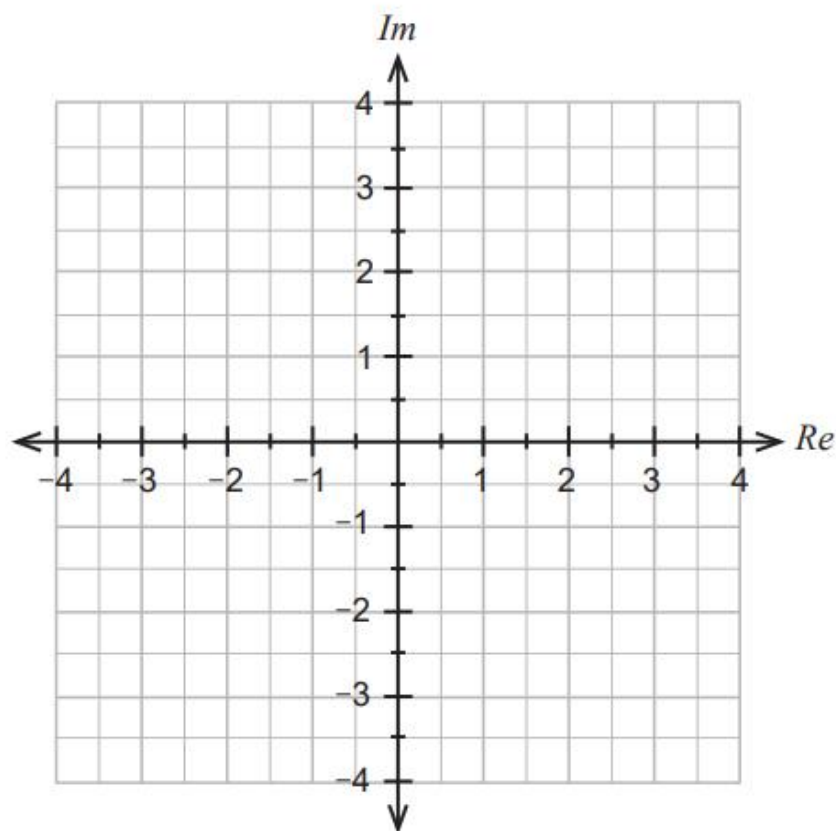


Question 9**(8 marks)**

- (a) Sketch the locus of a complex number z satisfying the condition:

$$|z - 2i| + |z - (3 - 2i)| = 5$$

(2 marks)

A spare grid is provided at the end of this Question/Answer booklet. If you need to use it, cross out this attempt and indicate that you have redrawn it on the spare grid.

- (b) Describe the locus of the equation $(z + i)(\overline{z + i}) = 2$.

(3 marks)

- (c) The sketch of the locus of a complex number z has been shown below. Write equations or inequalities in terms of z (without using $x = \operatorname{Re}(z)$ or $y = \operatorname{Im}(z)$) for the indicated locus. (3 marks)

