

EXERCISES

FEEDBACK

FB 1

FB 1.1

- a) Let $w = 3 - i$. Draw, on a single properly labeled Argand diagram

$$w, \bar{w}, -w, -\bar{w}, iw, i^2w, i^3w \text{ and } i^4w.$$

- b) Describe in words the geometric effect on a complex number

- (i) on taking the complex conjugate,
- (ii) on taking the additive inverse, and
- (iii) on multiplying by i .

FB 1.2 The origin O is taken at the centre of a regular hexagon $ABCDEF$. Express the position vectors of the vertices C, D, E, F in terms of \mathbf{a} and \mathbf{b} , the respective position vectors of A and B .

Recall that your submission should be well communicated written mathematics. In particular, it will be marked using the *SOLVE written mathematics* marking scheme available on Moodle. We strongly encourage you solve the exercises for yourself, and then write-up your solution following the procedure practiced in Feedback Exercises 0.

By convention, the vertices of a hexagon $ABCDEF$ are labelled sequentially (either clockwise or anti-clockwise) as A, B, C, D, E and F .