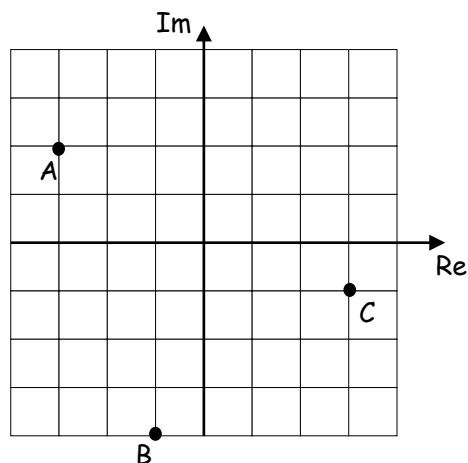


## Section 2: The Argand diagram

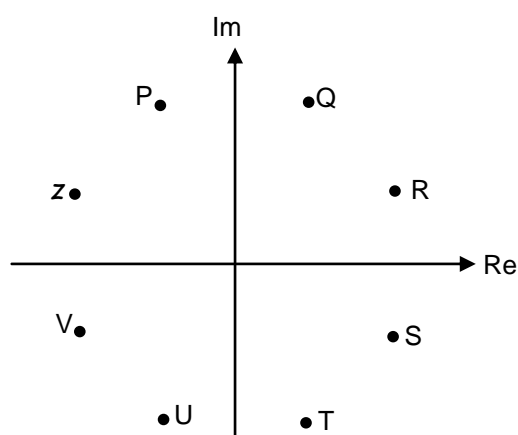
### Section test

Questions 1 – 3 refer to the Argand diagram below.



1. In the Argand diagram, what is the complex number represented by the point A?
2. In the Argand diagram, what is the complex number represented by the point B?
3. In the Argand diagram, what is the complex number represented by the point C?

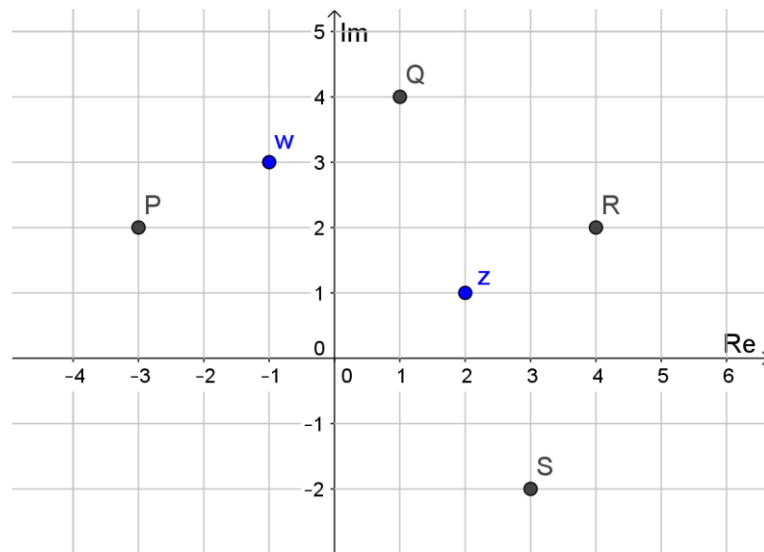
Questions 4 – 6 refer to the Argand diagram below. The point representing the complex number  $z$  is shown on the diagram.



4. Which point represents  $z^*$ ?
5. Which point represents  $iz$ ?
6. Which point represents  $-z$ ?

## Edexcel AS FM Complex numbers 2 section test solns

Questions 7 – 10 refer to the Argand diagram below.



7. Which of the points P, Q, R and S represents the complex number  $z + w$ ?
8. Which of the points P, Q, R and S represents the complex number  $z - w$ ?
9. Which of the points P, Q, R and S represents the complex number  $w - z$ ?
10. Which of the points P, Q, R and S represents the complex number  $2z$ ?

# Edexcel AS FM Complex numbers 2 section test solns

## Solutions to section test

1. A has coordinates  $(-3, 2)$ . This represents the complex number  $-3 + 2i$ .
2. B has coordinates  $(-1, -4)$ . This represents the complex number  $-1 - 4i$ .
3. C has coordinates  $(3, -1)$ . This represents the complex number  $3 - i$ .
4. Let the point representing  $z$  have coordinates  $(-a, b)$ , where  $a$  and  $b$  are positive.  
The complex number  $z$  is therefore  $-a + bi$ .  
The complex number  $z^*$  is therefore  $-a - bi$ .  
This is represented by the point  $v$ .
5. The complex number  $iz$  is  $i(-a + bi) = -ai - b = -b - ai$ .  
This is represented by the point  $u$ .
6. The complex number  $-z$  is  $-(-a + bi) = a - bi$ .  
This is represented by the point  $s$ .
7. The complex number  $z + w$  is represented by the point  $Q$ .
8. The complex number  $z - w$  is represented by the point  $S$ .
9. The complex number  $w - a$  is represented by the point  $P$ .
10. The complex number  $zz$  is represented by the point  $R$ .