

Commentary on candidate evidence

Question 1(b)

The evidence for the following candidates has achieved the marks given below:

Candidate 1

The candidate was awarded **2 marks**.

There was evidence of use of the quotient rule and one term of the numerator was correct, so Mark 4 was awarded. Mark 5 was not, because the first term in the numerator was incorrect. Mark 6 was awarded on follow-through because the simplification was not unduly eased.

Candidate 2

The candidate was awarded **2 marks**.

There was evidence of use of the quotient rule and one term of the numerator was correct, so Mark 4 was awarded. Mark 5 was not, because of the transcription error in the first term of the numerator. Mark 6 was awarded on follow-through because the simplification was not unduly eased.

Question 8

Candidate 3

The candidate was awarded **5 marks**.

In part (a), z was correctly plotted on an Argand diagram.

In part (b) the modulus was correct, and the final form was explicitly mentioned in Note 4 of the Marking Instructions. This question performed as A/B.

For part (c), the modulus and argument were processed correctly but the result was not in the required form, so mark 6 was not awarded. The missing brackets in the third last line were treated as bad form because the cosine and sine were correctly processed in the following line. This question performed as A/B.

Candidate 4

The candidate was awarded **2 marks**.

In part (a), z was correctly plotted on an Argand diagram.

In part (b) the modulus was incorrect, and the Marking Instructions explicitly state that, in this case, incorrect working subsequent to the correct value for the angle should be penalised. Marks 2 and 3 were, therefore, not awarded.

In part (c), mark 4 was withheld as the working was eased. Mark 5 was awarded on correct follow through and incorrectly taking out a common factor meant that mark 6 could not be awarded.

Candidate 5

The candidate was awarded **4 marks**.

In part (a), z was correctly plotted on an Argand diagram.

In part (b) the modulus was correct, leading to the awarding of mark 2. Had a degree symbol appeared at any point in the response, mark 3 would have been awarded, however, it did not.

In part (c), mark 4 was awarded for correct modulus, mark 5 was awarded for correct follow through but mark 6 was withheld because of the missing negative sign when the cosine was evaluated.

Question 3

Candidate 6

The candidate was awarded **2 marks**.

Marks 1, 2 and 3 were not awarded as there was no attempt to find the general term. Marks 4 and 5 were awarded because there was a full expansion which produced a clearly identified correct coefficient of the required term.

Candidate 7

The candidate was awarded **4 marks**.

Mark 1 was awarded for correct general term, mark 2 was awarded for coefficients and signs (3 to the power 13 had been evaluated); mark 3 was not awarded as the general term had not been fully simplified. Mark 4 was awarded as this could be obtained by inspection. Mark 5 was awarded for correct term.

Question 2

Candidate 8

The candidate was awarded **4 marks**.

In part (a) mark 1 was not awarded – incorrect index. Marks 2 and 3 were awarded on follow through.

In part (b) the lower boundary was not stated so mark 4 was not awarded.

In part (c) marks 5 and 6 were awarded on follow through.

Question 15

Candidate 9

The candidate was awarded **4 marks**.

Mark 1 was awarded for correct auxiliary equation – see Note 1 of the Marking Instructions. Mark 2 was not awarded for incorrect complementary function.

Marks 3 to 6 were unavailable as no particular integral attempted. Marks 7 to 9 were awarded on follow through. Mark 10 was not awarded for incorrect second coefficient.