

Commentary on candidate evidence

The evidence for these candidates has achieved the following marks for each question of this course assessment component.

Candidate 1

Question 1(a)

The candidate was awarded **2/3 marks**.

- ◆ Marks 1 and 2 awarded
- ◆ Mark 3 not awarded

Question 1(b)

The candidate was awarded **1/3 marks**.

- ◆ Mark 4 awarded
- ◆ Marks 5 and 6 not awarded (see note 5 of the marking instructions)

Question 1(c)

The candidate was awarded **2/2 marks**.

- ◆ Marks 7 and 8 awarded

Candidates made careless errors in all parts of this question.

Candidate 2

Question 1(a)

The candidate was awarded **2/3 marks**.

- ◆ Mark 1 awarded
- ◆ Mark 2 not awarded
- ◆ Mark 3 awarded

Question 1(b)

The candidate was awarded **2/3 marks**.

- ◆ Mark 4 not awarded
- ◆ Marks 5 and 6 awarded

Question 1(c)

The candidate was awarded **2/2 marks**.

- ◆ Marks 7 and 8 awarded

Despite the familiarity of this question, a significant number of candidates' understanding of medians and altitudes was poor.

Candidate 3

Question 2

The candidate was awarded **2/4 marks**.

- ◆ Marks 1 and 2 awarded
- ◆ Marks 3 and 4 not awarded

Although candidates understood the process, many lost marks by not simplifying fractions, omitting the '+c', and making careless errors.

Candidate 4

Question 2

The candidate was awarded **3/4 marks**.

- ◆ Marks 1, 2 and 3 awarded
- ◆ Mark 4 not awarded

Candidate 5

Question 3(b)

The candidate was awarded **1/2 marks**. (Candidate A)

Question 3 was generally answered well.
Candidates should be encouraged to show a valid pathway.

Candidate 6

Question 4(a)

The candidate was awarded **1/1 marks**.

Question 4(b)(i)

The candidate was awarded **0/1 marks**.

Question 4(b)(ii)

The candidate was awarded **2/2 marks**.

A significant number of candidates were unable to give a correct mathematical justification for mark 2.

Candidate 7

Question 4(a)

The candidate was awarded **1/1 marks**.

Question 4(b)(i)

The candidate was awarded **0/1 marks**.

Question 4(b)(ii)

The candidate was awarded **2/2 marks**.

Some candidates struggled to express inequalities at mark 2 correctly.

Candidate 8

Question 4(a)

The candidate was awarded **0/1 marks**.

Question 4(b)(i)

The candidate was awarded **0/1 marks**.

Question 4(b)(ii)

The candidate was awarded **1/2 marks**.

- ◆ Mark 3 awarded
- ◆ Mark 4 not awarded

Candidates should be encouraged to review the question to ensure that they have answered it fully.

Candidate 9

Question 5

The candidate was awarded **1/2 marks**.

- ◆ Mark 1 awarded
- ◆ Mark 2 not awarded

Candidates must consider the symmetry of the parabola.

Candidate 10

Question 6(a)

The candidate was awarded **2/4 marks**.

- ◆ Mark 1 awarded
- ◆ Marks 2 and 3 not awarded (candidate E)
- ◆ Mark 4 awarded

Question 6(b)

The candidate was awarded **1/3 marks**.

- ◆ Mark 5 awarded
- ◆ Marks 6 and 7 not awarded

Part (a) was answered well by most candidates, however, trivial errors still cost candidates marks.

Candidate 11

Question 6(a)

The candidate was awarded **2/4 marks**.

- ◆ Mark 1 awarded
- ◆ Mark 2 not awarded
- ◆ Mark 3 awarded
- ◆ Mark 4 not awarded (Candidate B)

Candidate 12

Question 6(b)

The candidate was awarded **2/3 marks**.

- ◆ Marks 5 and 6 awarded
- ◆ Mark 7 not awarded

Few candidates correctly considered the range of x .

Candidate 13

Question 7(a)

The candidate was awarded **2/3 marks**

- ◆ Marks 1 and 2 awarded
- ◆ Mark 3 not awarded

Candidate 14

Question 7(a)

The candidate was awarded **1/3 marks**

- ◆ Mark 1 not awarded
- ◆ Mark 2 awarded
- ◆ Mark 3 not awarded

Candidate 15

Question 7(a)

The candidate was awarded **1/3 marks**

- ◆ Mark 1 not awarded
- ◆ Mark 2 awarded
- ◆ Mark 3 not awarded

The standard of responses for 'completing the square' has not improved.

Candidate 16

Question 7(b)

The candidate was awarded **3/3 marks**.

- ◆ Marks 4, 5 and 6 awarded (method 2 of the marking instructions)

Few candidates obtained full marks for this part of the question.

Candidate 17

Question 8(a)

The candidate was awarded **2/3 marks**.

- ◆ Mark 1 not awarded
- ◆ Marks 2 and 3 awarded

Candidate 18

Question 8(a)

The candidate was awarded **2/3 marks**

- ◆ Marks 1 and 2 awarded
- ◆ Mark 3 not awarded

Candidate 19

Question 8(a)

The candidate was awarded **1/3 marks**

- ◆ Mark 1 awarded
- ◆ Marks 2 and 3 not awarded

Responses for question 8(b) were very poor.

Candidates did not understand the link between the range of $f(x)$ and the domain of $f^{-1}(x)$.

Knowledge and use of the terms domain and range is part of the course specification.

Candidate 20

Question 9(a)

The candidate was awarded 0/1 marks.

- ◆ Mark 1 not awarded

A significant number of candidates interpreted $t = 1$ as the initial value.**Candidate 21**

Question 9(b)

The candidate was awarded **3/4 marks**.

- ◆ Mark 2 not awarded
- ◆ Marks 3, 4 and 5 awarded

Many candidates did not interpret the information in the question correctly.

Candidate 22

Question 10(b)

The candidate was awarded **3/5 marks**.

- ◆ Marks 1, 2 and 3 awarded
- ◆ Marks 4 and 5 not awarded

Candidate 23

Question 11(b)

The candidate was awarded **3/6 marks**.

- ◆ Marks 4, 5 and 6 awarded
- ◆ Marks 7, 8 and 9 not awarded

Candidate 24

Question 11(b)

The candidate was awarded **4/6 marks**.

- ◆ Marks 4, 5 and 6 awarded
- ◆ Marks 7 and 8 not awarded
- ◆ Mark 9 awarded

Candidate 25

Question 11(b)

The candidate was awarded **2/6 marks**.

- ◆ Mark 4 awarded
- ◆ Mark 5 not awarded
- ◆ Mark 6 awarded
- ◆ Marks 7, 8 and 9 not awarded (see note 7 of the marking instructions)

For a standard question, part (a) was poorly attempted. Many candidates were unable to interpret the information correctly. A significant minority made no attempt at question 11(b).

Candidate 26

Question 12

The candidate was awarded **0/5 marks**.

Many candidates did not use a valid method in this question.

Candidate 27

Question 12

The candidate was awarded **1/5 marks**.

- ◆ Mark 1 awarded (method 3 of the marking instructions)
- ◆ Marks 2, 3, 4 and 5 not awarded (see note 1 of the marking instructions)

Candidate 28

Question 12

The candidate was awarded **1/5 marks**.

- ◆ Mark 1 awarded (method 1 of the marking instructions)
- ◆ Marks 2, 3, 4 and 5 (see note 1 of the marking instructions)

Candidate 29

Question 12

The candidate was awarded **0/5 marks**.

- ◆ No marks awarded (see note 1 of the marking instructions)

Candidate 30

Question 13

The candidate was awarded **2/5 marks**.

- ◆ Marks 1 and 2 awarded
- ◆ Marks 3, 4 and 5 not awarded

Not considering '+c' cost candidates multiple marks.

Candidate 31

Question 13

The candidate was awarded **0/5 marks**.

- ◆ No marks awarded (see note 5 of the marking instructions)

Candidate 32

Question 13

The candidate was awarded **3/5 marks**.

- ◆ Marks 1, 2 and 3 awarded
- ◆ Marks 4 and 5 not awarded (similar to Candidate A)

Candidate 33

Question 14

The candidate was awarded **2/4 marks**.

- ◆ Mark 1 awarded
- ◆ Marks 2 and 3 not awarded
- ◆ Mark 4 awarded

Candidate 34

Question 14

The candidate was awarded **1/4 marks**.

- ◆ Mark 1 awarded
- ◆ Marks 2, 3 and 4 not awarded

Many candidates were unable to deal with the distributive properties of the scalar product or recognise $\mathbf{u} \cdot \mathbf{u} = |\mathbf{u}|^2$.

Candidate 35

Question 15(a)

The candidate was awarded **3/3 marks**.

- ◆ Marks 1, 2 and 3 awarded

Question 15(b)(i)

The candidate was awarded **1/1 marks**.

Question 15(b)(ii)

The candidate was awarded **0/3 marks**.

Most candidates were unable to interpret the information in part (b) correctly.