Commentary on candidate evidence

The candidate evidence has achieved the following marks for each question.

Candidate 1

Question 1

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded – it is not sufficient to leave the equation in the form $y-b=m\left(x-a\right)$ and errors in the expansion were common.

Candidate 2

Question 1

- Mark 1 awarded – note 1 in the marking instructions covers errors in processing the constant term.
- Mark 2 awarded
- Mark 3 awarded

Candidate 3

Question 1

- Mark 1 not awarded – it was common to see errors in the evaluation of the gradient.
- Mark 2 awarded – on follow through.
- Mark 3 awarded

Candidate 4

Question 2

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 awarded – the introduction of x was a common strategy, sometimes in line with the response and sometimes as working at the side.

Candidate 5

Question 3

- Mark 1 not awarded – Candidate B in the marking instructions highlights a response where there are two inconsistent expressions for y which does not gain full credit.
- Mark 2 awarded – on follow through.
- Mark 3 awarded – on follow through.

Candidate 6

Question 3

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded – incorrect notation.

Candidate 7

Question 3

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded – general marking principle (j) states that candidates should simplify numerical values as far as possible.

Candidate 8

Question 3

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded – Candidate A in the marking instructions highlights another type of response containing two inconsistent expressions for y which does not gain full credit.

Candidate 9

Question 5

- Mark 1 not awarded – many candidates did not identify that the angle in the question was not the angle that the straight line made with the x-axis.
- Mark 2 awarded – on follow through.
- Mark 3 awarded

Candidate 10

Question 5

- Mark 1 awarded
- Mark 2 not awarded – it was common to see responses where candidates were not able to recall the correct exact value.
- Mark 3 awarded – on follow through.

Candidate 11

Question 6

- Mark 1 not awarded – it was common to see candidates treating the square root with a lack of rigour.
- Mark 2 not awarded – many candidates appeared to carry out both differentiation and integration with a lack of rigour with missing terms often appearing in subsequent lines of working.
- Mark 3 awarded – on follow through.
- Mark 4 awarded – on follow through.

Candidate 12

Question 6

- Mark 1 awarded
- Mark 2 not awarded – missing '$\times -\frac{1}{3}$' was a common response.
- Mark 3 not awarded – note 4 of the marking instructions applies where the substitution is not into an expression equivalent to the integral obtained at mark 2.
- Mark 4 not awarded – further numerical errors have been made.

Candidate 13

Question 7(b)

- Mark 3 awarded
- Mark 4 awarded
- Mark 5 not awarded – numerical errors were very common in this question.

Candidate 14

Question 7(b)

- Marks 3, 4 and 5 not awarded – note 3 of the marking instructions shows how to mark responses with this type of invalid expansion of $\sin(q-r)$.

Candidate 15

Question 7(b)

- Mark 3 awarded
- Mark 4 awarded
- Mark 5 not awarded – numerical errors were very common in this question.

Candidate 16

Question 9

- Mark 1 awarded
- Mark 2 not awarded – errors in simplification were common and often meant that candidates were unable to obtain a final answer.
- Marks 3, 4 and 5 not awarded

Candidate 17

Question 9

- Mark 1 not awarded
- Mark 2 awarded – on follow through.
- Mark 3 awarded – on follow through.
- Mark 4 awarded – for solving for $\cos x$.
- Mark 5 not awarded – errors with using exact values cost candidates marks.

Candidate 18

Question 10

- 1 out of the available 3 marks awarded – in this case both graphs which the candidate sketched gained the same number of marks.

Candidate 19

Question 11

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded – this candidate attempted the question multiple times but has not scored out responses which they do not want to be marked. Since each attempt used the same valid strategy, the lowest mark was awarded in line with general marking principle (p).

Candidate 20

Question 12

- Mark 1 not awarded – note 2 in the marking instructions explains that working in degrees from the outset means that mark 1 is not available.
- Mark 2 awarded
- Mark 3 not awarded – errors with exact values were common.

Candidate 21

Question 12

- Mark 1 awarded
- Mark 2 not awarded – errors completing the differentiation were common.
- Mark 3 not awarded – errors processing the substitution were also common.

Candidate 22

Question 12

- Mark 1 awarded
- Mark 2 not awarded – errors completing the differentiation were common.
- Mark 3 not awarded – errors with exact values were common.

Candidate 23

Question 14

- Mark 1 awarded
- Mark 2 awarded
- Mark 3 not awarded
- Mark 4 awarded – on follow through.
- Mark 5 awarded – on follow through using the incorrect values from 14(a)(ii).
- Mark 6 not awarded