

QUESTION 1

- 1.1 Generally well answered. However, many candidates simplified the fractions incorrectly.
- 1.1.2 Most candidates made use of the formula correctly, but many interchanged the x and y values.
- 1.1.3 Many candidates substituted incorrectly for the gradient. There were many notation errors when solving for \equiv .
- 1.2.1 A large number of candidates recalculated the gradient unnecessarily and incorrectly. Simplification of the straight-line equation was also poorly done.
- 1.2.2 Following on the mistake in 1.2.1, many candidates scored marks here for method only.
- 1.2.3 Very poorly answered. Many candidates made incorrect conclusions or did not arrive at a conclusion at all.
- 1.3 Distance formula not applied well. Many candidates neglected to square both sides when simplifying the equation. A large number of candidates omitted the " = 0" when factorising the resulting trinomial.

QUESTION 2

- 2.1.1 Well answered. Candidates could connect the value of y with a. Clever candidates could see that the answer was given in 2.1.4 and they scored full marks .
- 2.1.2 We should rather ask for the equation of a circle, and not ask to prove the equation.
- 2.1.3 Well put and also well answered. Candidates were confident doing simultaneous equations.
- 2.1.4 Most candidates could answer this question and find the equation of the tangent. They just forgot to reciprocate the gradient.
- 2.2.1 The majority of candidates scored marks and usually used the equating distances method.

QUESTION 3

- 3.1.1 This question had to be attempted without using a calculator. The candidates calculations had too many different answers. The co-function should be tested.
- 3.1.2 Candidates were penalized for not rounding off to 2 decimal digits.

3.2.1 To many marks were awarded here for wrong answers. It was difficult to mark the tan ratio (when signs were in the wrong quadrants). Only one trig ratio should have been asked, instead of $\sin = + \cos =$.

3.2.2 A good question which candidates managed well.

QUESTION 4

4.1 Reasonably well answered. The shape of graphs needs more attention. Some candidates used straight lines to connect two points, which is incorrect.

4.2 & 4.3

Candidates could not make deductions from graphs. They should give only x-values if asked to do so, and not the co-ordinate form.

4.3.2 Candidates who attempted this question had difficulties with the interval notation.

QUESTION 5

5.1 Candidates who studied the proof knew what to do and answered this well. If using different letters, they should just be taught to indicate this on their sketch.

5.2 The tan ratio was known by almost everyone, but that was all. Not answered well.

QUESTION 6

6.1 Many candidates battled with the theory relating to the use of the different triangles. Candidates who made use of the distance formula to provide the proof struggled, as they did not know the basic underlying principles.

6.2 In general, this question was poorly answered. Only certain candidates could calculate the value of the angle correctly.

6.2.2 Few candidates could link Question 6.2.1 with 6.2.2, with the result that this question was poorly answered.

6.2.3 Candidates could do the substitution, but struggled to work out angles using the calculator.

6.3.1 Most candidates knew how to use the sine-formula to calculate the angles and so, in general, this question was answered well.

6.3.2 Some candidates took triangle ABC to be a right-angled triangle. However, most of them answered this question successfully.

QUESTION 7

7.1 Very poorly answered. Candidates still battle with geometry. We must, however, add that at least attempts were made, whereas such questions were just left unanswered in the recent past. It was a very good question, which combined Pythagoras with geometry.

QUESTION 8

This question was, generally speaking, very poorly attempted.

8.1 As always, too many SG candidates do not learn the theorems and lose these marks. Candidates must remember to label angles correctly when making constructions.

8.2.1a) Many candidates calculated the central angle (70°) first and then erroneously assumed that BCED is a cyclic quadrilateral, to arrive at $B = 110^\circ$.

b) Candidates must be reminded to always include a reason with a statement when answering geometry questions. (c & d) Poorly answered. Many candidates did not see the circle and the cyclic quad geometry. This is an area where much improvement is needed.

8.2.2 Poorly answered. The assumption was already made in 8.2.1.(a) that BCDE was a cyclic quadrilateral. No marks were awarded in such cases as this was a circular argument.

QUESTION 9

9.1 Although they seemed to know exactly what to do, many learners lost the last mark.

9.2 A good question which candidates answered well .

9.3 This question was tested twice .The tangent chord theorem could have been asked in a different way.