

# MATHEMATICS

## SUBJECT 4008/4028

### PAPER 1

#### GENERAL COMMENTS

Many candidates failed to show systematic clear working. Some did not show any working at all. Some of the well answered questions were on fractions, polygons, matrices, circumference of circle, vectors and locus construction. The poorly answered topics were significant figures, indices, simultaneous equations, variation and probability.

#### SPECIFIC COMMENTS (QUESTION BY QUESTION)

##### QUESTION 1

- (a) (i) Well done.
- (a) (ii) Fairly done. Wrong comma placement was common. Common wrong answers were 0,05 and 0,0005.
- (b) Fairly done. 85 was a common wrong answer seen.

##### QUESTION 2

- (a) Poorly done. 2 was a common wrong answer seen.
- (b) Poorly done. 25 was a common wrong answer seen.

##### QUESTION 3

- (a) Fairly done.
- (b) Well done. Wrong signs were observed in a number of scripts.

##### QUESTION 4

- (a) (i) Well done.
- (a) (ii) Well done.
- (b) Fairly done. Many struggled with the correct spelling. Some common wrong answers were isosceles and quadrilateral.

##### QUESTION 5

- (a) Well done.
- (b) Poorly done. 2 was a common wrong answer seen.

**QUESTION 6**

- (a) Well done.
- (b) Well done.
- (c) Poorly done. 6 was a common wrong answer seen.

**QUESTION 7**

- (a) Well done. Wrong units were observed in some scripts.
- (b) Poorly done. Candidates failed to convert 55 kilometres to centimetres.

**QUESTION 8**

Poorly done. Missing and/or elements were common.

**QUESTION 9**

- (a) Fairly done.
- (b) Fairly done.

**QUESTION 10**

- (a) Fairly done. Some candidates failed to divide by 100 to get the percentage. 13 000 000 and 130 000 000 were common wrong answers seen.
- (b) Fairly done.

**QUESTION 11**

- (a) Poorly done.  $329^\circ$  and  $031^\circ$  were common wrong answers seen.
- (b) Poorly done.  $091^\circ$  was a common wrong answer seen.

**QUESTION 12**

- (a) Fairly done.
- (b) Fairly done. Free-hand lines were seen in some of the scripts.

**QUESTION 13**

Poorly done. The most common wrong answers were  $x = 2$ ,  $y = -3$ .

**QUESTION 14**

- (a) Well done.
- (b) Poorly done.

**QUESTION 15**

- (a) Poorly done. 62 was a common wrong answer seen.
- (b) Poorly done. 28 was a common wrong answer seen.
- (c) Poorly done.

**QUESTION 16**

- (a) Fairly done.
- (b) Poorly done.
- (c) Fairly done.

**QUESTION 17**

- (a) Well done. Broken lines and extra lines were common.
- (b) Well done.

**QUESTION 18**

- (a) Fairly done.
- (b) Poorly done.

**QUESTION 19**

- (a) Well done.
- (b) Fairly done. Many candidates rounded off their answers and got 0,151.

**QUESTION 20**

- (a) Poorly done. Many candidates failed to deal with the negative indices.
- (b) Fairly done. 14 was a common wrong answer seen.

**QUESTION 21**

- (a) Fairly done. 13,3 was a common wrong answer seen.
- (b) Fairly done. 90 was a common wrong answer seen.

**QUESTION 22**

- (a) Well done.
- (b) Fairly done. 180 was a common wrong answer seen.

**QUESTION 23**

- (a) Poorly done.  $\frac{5}{12}$  was a common wrong answer seen. Many struggled with  $\sqrt{169}$ .
- (b) Poorly done.  $\frac{12}{13}$ ,  $180 - \frac{12}{13}$ , and  $\cos\left(180 - \frac{12}{13}\right)$  were common wrong answers seen.

**QUESTION 24**

- (a) Poorly done. Some common wrong answers were 2,  $\frac{1}{3}$ ,  $\frac{1}{6}$ ,  $\frac{1}{36}$  and  $\frac{3}{36}$ .
- (b) Poorly done. Various wrong answers were observed including answers greater than 1.

**QUESTION 25**

- (a) Poorly done. Some candidates stated angles instead of the triangle. CDE was a common wrong answer seen.
- (b) Poorly done. 8,5 was a common wrong answer seen.

**QUESTION 26**

- (a) Fairly done.
- (b) Poorly done. 2:1 was a common wrong answer seen.

**QUESTION 27**

- (a) Fairly done. 21 and 12 were common wrong entries observed.
- (b) Fairly done. -3 was a common wrong answer seen.

**QUESTION 28**

- (a) Poorly done. A good number failed to establish the correct gradient of the line.
- (b) (i) Fairly done. A wrong answer seen was  $\sqrt{13}$ .
- (ii) Fairly done. 12 was a common wrong answer seen.

**QUESTION 29**

- (a) Fairly done.
- (b) Fairly done. -16 was a common wrong answer seen.
- (c) Poorly done. Many failed to calculate the area of a section or two under the graph.