HSC General Mathematics 2002
Quick Answers

Disclaimer

These answers are intended as a quick guide only. To save space there are no worked solutions or diagrams. For greater detail please refer to fully worked solutions.

Section 1

1	**D**
2	**B**
3	**C**
4	**B**
5	**A**
6	**A**
7	**C**
8	**D**
9	**D**
10	**B**
11	**C**
12	**D**
13	**D**
14	**A**
15	**B**
16	**C**
17	**B**
18	**C**
19	**A**
20	**B**
21	**D**
22	**C**

Section 2

Question 23

(a) (i) \$1206.70
(ii) \$525.
(iii) (1) 150 euros.
(2) \$310.34

(b) (i) \$58 246.
(ii) Katherine
(Liz finishes with \$58 081)

(c) (i) \$181.25
(ii) (1) \$3400
(2) After 35 months.

Question 24

(a) (i) $\frac{1}{4}$

(iii) 22.

(b) (i) $A = 43$, $B = 18$.
(ii) 123.

(iii) $\frac{70}{123}$

(iv) $\frac{8}{70} = \frac{4}{35}$

(c) (i) $\frac{1}{12}$

(ii) $\frac{1}{12}$

(iii) $\frac{3}{4}$.

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Question 25

(a) (i) (1) ΔABC and ΔADE.
(2) 4.
(3) 80 cm.
(ii) $\frac{d}{200} = \frac{20}{x}$ OR $\frac{d}{20} = \frac{200}{x}$
(or reciprocals of these)

(b) (i) Adelaide is 10 hours and 20 minutes ahead of Buenos Aires.
(ii) 8:20 am Saturday.

(c) (i) 3.4×10^{16} km^2.

(ii) $R = \sqrt{\frac{A}{\pi} + r^2}$ OR $R = \sqrt{\frac{A + \pi r^2}{\pi}}$.

(iii) 1.65 mm.

Question 26

(a) 9.

(b) (i) 3.13
(ii) 1.66
(iii) 4
(iv) The data is negatively skewed.
(v) 80 students.

(c) (i) 3 students.
(ii) 0.5
(iii) $y = \frac{1}{2}x + 10$.
(iv) There is a strong positive correlation.
(v) There is one student who scored in the 90s in Algebra, but only about 30 in Geometry, which was NOT near the top.

Question 27

(a) (i) 136°.
(ii) 37.1 km.
(iii) 226°.

(b) (i) 22.3 cm.
(ii) 25°.

(c) (i) 15 400 m^2.
(ii) 17 200 m^2.

Question 28

(a) (ii) x must be positive because it is a length. If it was zero then the sheet of metal would not be a gutter.
x must be less than half the width of the metal – ie it must be less than 14 cm.

(iii) 98.

(b) (i) $Q = 50n$.

(iv) Toby only gets to \$14 067.58, which does not achieve his goal.

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