HSC General Mathematics 2003
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	**B**
2	**D**
3	**C**
4	**B**
5	**C**
6	**D**
7	**B**
8	**D**
9	**A**
10	**A**
11	**C**
12	**A**
13	**C**
14	**B**
15	**B**
16	**D**
17	**C**
18	**D**
19	**B**
20	**A**
21	**A**
22	**C**

Section 2

Question 23

(a) (i) 15.6 Litres.
(ii) Approximately 10 cents.
(iii) 18 000 drops.
(iv) 30 drops / minute.

(b) 3181 cm^2.

(c) 50 m^2.

(d) (i) 613 cm^3.
(ii) The engine's capacity is 4.9 Litres, which is less than 5 Litres.

Question 24

(a) $27 667.89

(b) (i) $69 424.
(ii) $19 373.52
(iv) She will have $12 133.21, which is enough.

(c) 6.36%.

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Question 25

(a) (i) (1) 2.
(2) The *most* common number of cars per household.
(ii) 53 013.
(iii) 30°.
(iv) $10.

(b) (i and ii)
Many answers possible, such as:
A higher percentage of primary students travel by car, because parents are more likely to take younger children to school, while older children are more likely to travel on their own.

(iii) 2500.

(c) (i) He scored one standard deviation above the mean.

(ii) 16%.

Question 26

(a) (i) $a = 60\,000$, which is the intercept on the N axis. This is the number of people at the end of the game, before anybody has left.
(ii) (1) 2000.
(2) The rate that people leave (in people / minute)
(iii) $t = \dfrac{a - N}{b}$
(iv) 5 minutes.

(b) (ii) 39 metres.

Question 27

(a) (i) 25% (or $\frac{1}{4}$)

(ii) (1) Hotel X, cold breakfast
Hotel X, hot breakfast
Hotel Y, cold breakfast
Hotel Y, hot breakfast
Hotel Z, cold breakfast
Hotel Z, hot breakfast

(2) Because he is more likely to stay at Hotel X.

(3) 12.5% (or $\frac{1}{8}$)

(b) (i) $\dfrac{25}{36}$

(ii) –$0.28

(c) (i) 32.2 metres.

(ii) 66.1 metres.

Question 28

(a) 231 pesos.

(b) (i) $y = 103\,400\,000 \times \left(1.0157^{x}\right)$.

(ii) 106 672 000

(c) (i) 25.

(ii) $F = (C + 12) \times 2$

(d) 29.3%

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