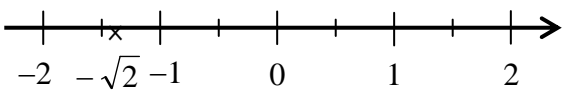
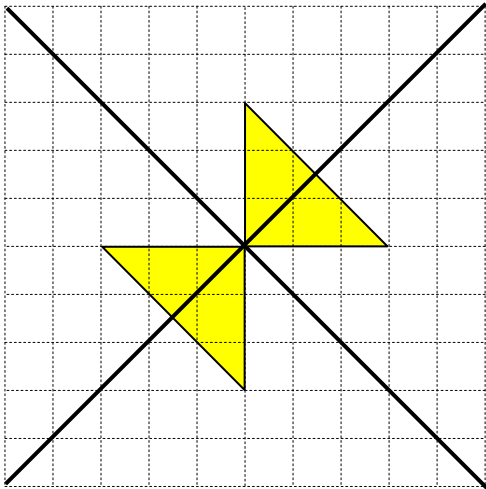


Education and Manpower Bureau
Territory-wide System Assessment 2007
Secondary 3 Mathematics
Marking Scheme

Question No.	Correct answer	Marks	Remarks
1.	B	1	
2.	C	1	
3.	A	1	
4.	A	1	
5.	A	1	
6.	A	1	
7.	B	1	
8.	B	1	
9.	D	1	
10.	C	1	
11.	B	1	
12.	A	1	
13.	B	1	
14.	B	1	
15.	D	1	
16.	C	1	
17.	A	1	
18.	D	1	
19.	$X = 20$ $Y = 0$ $Z = -30$	1	Mark given only when all answers are correct.
20.	(i) Estimated value (ii) Exact value	1	Mark given only when both answers are correct.
21.		1	$-\sqrt{2} \approx -1.41$ (Acceptable range: $-1.5 < -\sqrt{2} < -1$)
22.	$100 - 13x = 48$	1	Accept equivalent equations

Question No.	Correct answer	Marks	Remarks
23.	$-32, 64$	1	Mark given only when both answers are correct and in right order.
24.	$6x + 5x^2$	1	Acceptable answers: $x(6+5x)$, $5x^2 + 6x$, etc.
25.	$-6x^2 + 8x$	1	Acceptable answer: $8x - 6x^2$
26.	-8	1	
27.	$(a + 1)(b + 1)$	1	Accept $(b + 1)(a + 1)$, etc.
28.	$a^2 - 25b^2$	1	
29.	Q and R	1	Accept $Q(-2, 0)$ and $R(-3, -2)$. Both points must be correct (irrespective of order)
30.	6	1	
31.	(i) < (ii) >	1	Mark given only when both answers are correct.
32.	$\triangle PQR$ / $\triangle QRP$ / $\triangle RPQ$ / $\triangle PRQ$ / $\triangle QPR$ / $\triangle RQP$	1	
33.	A, C	1	Mark given only when both answers are correct.
34.		1	
35.	congruent, AAS	1	Mark given only when both answers are correct.

Question No.	Correct answer	Marks	Remarks
36.	40	1	
37.	120	1	
38.	AH/HA	1	
39.	Triangle A, Triangle B	1	Mark given only when both answers are correct.
40.	$(\underline{3}, \underline{-4})$	1	
41.	$(4) \rightarrow (1) \rightarrow (3) \rightarrow (2)$	1	In order
42(a).	21	1	
42(b).	3	1	
42(c).	34	1	
43.	$\frac{47}{200}$ or 0.235	1	Acceptable answer: 23.5%
44.	<p>Let \$C be the cost of the handbag.</p> $C(1 + 45\%) = 464$ $C = 320$ <p>\therefore The cost price of the handbag is \$320.</p> <p>OR</p> <p>The cost of the handbag</p> $= \$464 \div (1 + 45\%)$ $= \$320$	<p>1</p> <p>1*</p> <p>1**</p> <p>1</p> <p>1*</p> <p>1**</p>	<p>Accept any other correct working</p> <p>1 mark for answer</p> <p>1 mark for literal expression / unit / presentation</p> <p>Accept any other correct working</p> <p>1 mark for answer</p> <p>1 mark for literal expression / unit / presentation</p>
45.	<p>Actual distance between P and Q</p> $= \frac{400\,000 \times 3.5}{1\,000 \times 100} \text{ km}$ $= 14 \text{ km}$	<p>1</p> <p>1*</p> <p>1**</p>	<p>Accept any other correct working</p> <p>1 mark for answer</p> <p>1 mark for literal</p>

Question No.	Correct answer	Marks	Remarks
49.	$\angle ABC = \angle ADE$ (given) $\angle ACB = \angle AED$ (given) $\angle BAC = \angle DAE$ (common angle) $\triangle ABC \sim \triangle ADE$ (AAA / equiangular)	$\left. \begin{array}{l} \\ \\ \end{array} \right\} 2$ 1	1 mark for correct proof 1 mark for correct reasons 1 mark for correct conclusion
50.	(a) 5 (b) The bars of different widths exaggerate the difference in annual sales of Company A and Company B. OR The areas of the bars are not proportional to the annual sales.	1* 1	1 mark for answer Accept any reasonable explanation
51.	Mean time $= \frac{9.78 + 9.79 + 9.83 + 9.84 + 9.86}{5} \text{ s}$ $= 9.82 \text{ s}$	1 1* 1**	Award 1 mark for the formula $\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$ 1 mark for answer 1 mark for literal expression / unit / presentation

Remarks:

*Answer mark: (1) Just the correct answer without showing mathematical expression: Award the answer mark.
 (2) Mathematical expression is incorrect: Do not award the answer mark.
 (3) Poor presentation in the mathematical expression or working but correct answer given: Award the answer mark.

**Presentation mark: (1) Mathematical expression is correct, but wrong answer given: Award the presentation mark.
 (2) Mathematical expression is incorrect: Do not award the presentation mark.
 (3) Presentation mark includes holistic assessment of mathematical expressions, units (missing unit or wrong unit), explanation, statement/conclusion and use of symbols, etc.