

PSLE Mathematics (Standard)

Answer Key

Paper 1

Booklet A (20 marks)

Questions 1 to 10: 1 mark each

Questions 11 to 15: 2 marks each

1.	(4)	6.	(1)	11.	(1)
2.	(3)	7.	(2)	12.	(4)
3.	(3)	8.	(1)	13.	(2)
4.	(1)	9.	(4)	14.	(1)
5.	(1)	10.	(3)	15.	(3)

Booklet B

Question 16 to 20 : 1 mark each

Questions 21 to 30: 2 marks each

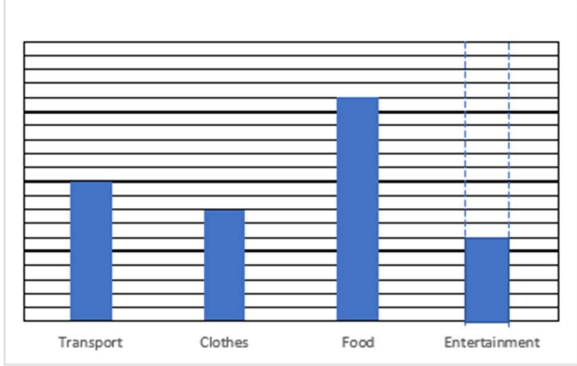
Question	Answer
16	968
17	$6\frac{2}{3}$
18	24, 48
19	23
20	\$40.30
21	$\frac{3}{7} \approx 0.43 \approx 0.4$
22	45.6 kg
23	$30 \times 2 = 60$ [M1] $60 \div 10 = 6$ [A1]
24	$\$30 - \6 (for first 2 5R photographs) = \$24 $\$24 \div \$2 = 12$ [M1] $12 + 2 = 14$ [A1]
25	$1u = 35 \div 5 = 7$ [M1] $24u = 24 \times 7 = 168$ muffins [A1]
26	$(5 - 4) \div 2 = 0.5$ [M1] $4 + 0.5 = 4.5$ $\frac{4.5}{20} = \frac{9}{40}$ [A1]

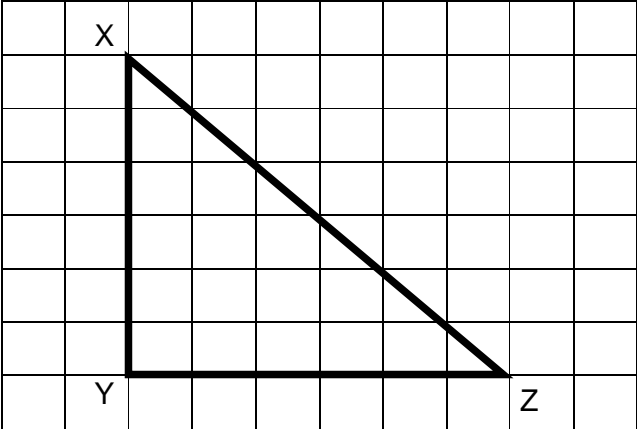
27	$\frac{102}{100} \times \$8\,200 = 102 \times \82 [M1] = \$8 364 [A1]
28	$10 + 6 + 4 + 10 = 30$ cm [M1A1]
29	Cherries = $8u + 36 = 11u + 12$ $8u + 36 = 11u + 12$ $36 - 12 = 11u - 8u$ $3u = 24$ [M1] $1u = 24 \div 3 = 8$ $11u = 8 \times 11 = 88$ bananas [A1]
30	Fig 1: No of white squares = 6 Fig 2: No of white squares = $6 + 4 \times 1$ Fig 3: No of white squares = $6 + 4 \times 2 = 14$ Hence, Fig 20: No of white squares = $6 + 4 \times 19 = 82$ white squares [M1A1]

Paper 2

Questions 1 to 5 : 2 marks each

Question	Answer
1	$2 \div \frac{3}{8} = 5\frac{7}{8}$ [M1] 5 [A1]
2	$80 \times 80 = 6\,400$ [M1] $6\,400 \times 200 \times \frac{1}{4} = 320\,000$ cm ³ [A1]
3	a) point <u>F</u> is east of point <u>E</u> [A1] b) point <u>B</u> is north-west of point <u>A</u> [A1]
4	$9\,000 \div 100 = 90$ [M1] $90 \times 120 = 10\,800$ [A1]
5	$X + Y = 7.4$ $Y + Z = 9.7$ $2X = Z$ $Y + Z = 2X + Y$ $2X + Y = 9.7$ $X = 9.7 - 7.4 = 2.4$ [M1] $Y = 7.4 - 2.3 = 5.1$ $Z = 2.3 \times 2 = 4.6$ $\frac{2.3 + 5.1 + 4.6}{3} = \frac{12}{3} = 4$ ℓ [A1]

6	$3 + 5 = 8$ $120 \div 8 = 15$ [M1] $15 \times 2 = 30$ [M1A1]
7	(a) One day $\rightarrow 24 \text{ h} \times 60 \text{ min} \times 60 \text{ s} = 86400 \text{ s}$ $86400 \times 3 \text{ mL} = 259200 \text{ mL} = 259.2 \text{ L}$ [M1A1] (b) $0.30 \times 259.2 = \$77.76$ [A1]
8	a) T : C : F 25 : 20 : 40 5 : 4 : 8 [A1] <div style="text-align: center;">  <p>[A2]</p> </div>
9	$\angle ADC = \angle ABC = 180^\circ - 65^\circ - 47^\circ = 68^\circ$ [M1] $\angle BCD = 180^\circ - 68^\circ = 112$ $\angle BCE = \angle CBE = 180^\circ - 112^\circ = 68^\circ$ [M1] $\angle ABE = 68^\circ + 68^\circ = 136^\circ$ [A1]
10	a) Melissa has \$g Taylor has $\$(g \times 3) = \$3g$ Daniel has $\$(3g - 10)$ Total amount = $\$(g + 3g + 3g - 10) = \$(7g - 10)$ [A1] b) Melissa + Taylor = $\$(g + 3g - 10) = \$(4g - 10)$ [M1] $\$(4g - 10) = \40 $\$4g = \50 $g = \$12.50$ [A1]
11	$64 \text{ m} - 40 \text{ m} = 24 \text{ m}$ $2u = 24$ $1u = 24 \div 2$ [M1] $= 12$ [A1] (Length of square) Area of shaded stage = $(\pi \times 6^2 \div 2) \text{ m}^2$ [M1] $= (36\pi \div 2) \text{ m}^2$ $= 18\pi \text{ m}^2$ [A1]

<p>12</p>	<p>a) $\frac{1}{2} \times 4 \times 6 = 12 \text{ cm}^2$ [A1]</p> <p>b) Area of triangle XYZ = $\frac{3}{2} \times 12 = 18$ [M1] $\frac{1}{2} \times XY \times YZ = 18$ Since triangle XYZ is isosceles, XY = YZ, $\frac{1}{2} \times XY \times XY = 18$ $XY \times XY = 36$ $6 \times 6 = 36$ $XY = YZ = 6 \text{ units}$ [M1]</p> <div style="text-align: right;">[A1]</div> 
<p>13</p>	<p>A : O : T 16 : 4 : 20</p> <p>$\frac{3}{4}$ of 20 = 15u [M1] $20u - 15u = 5u$ fruits left Apples left $\rightarrow \frac{1}{8}$ of 16u = 2u [M1] $5u = 2u + 30$ [M1] $3u = 30$ $1u = 10$</p> <p>Amount of fruits in the crate at first = $10 \times 20 = 200$ [A1]</p>
<p>14</p>	<p>a) $\angle x = 180^\circ - 59^\circ - 59^\circ = 62^\circ$ [A1] b) $\angle ABF = 180^\circ - 117^\circ = 63^\circ$ $\angle DEF = 360^\circ - 63^\circ - 117^\circ - 59^\circ = 121^\circ$ [M1] $\angle GEF = 121 - 62 = 59^\circ$ $\angle CGE = 360^\circ - 117^\circ - 59^\circ - 59^\circ = 125^\circ$ [M1] $\angle y = 180^\circ - 125^\circ = 55^\circ$ [A1]</p>

15	<p>a) $13 - 5 = 8$ Let the radius of the small circle be 1u. $3u = 44 - 8 - 5 - 5 - 5 = 21$ [M1] $1u = 21 \div 3 = 7$ cm [A1]</p> <p>b) Radius of big semi-circle = $7 + 5 = 12$ $3.14 \times 12 \times 2 = 75.36$ $3.14 \times 7 \times 2 = 42.96$ [M1] $75.36 + 42.96 + 5 + 5 + 5 + 5 + 13 = 152.43$ cm [A1]</p>														
16	<table border="1"> <thead> <tr> <th>[M1]</th> <th>Large</th> <th>Small</th> </tr> </thead> <tbody> <tr> <td>Number</td> <td>36</td> <td>32</td> </tr> <tr> <td>Quantity</td> <td>3u</td> <td>1u</td> </tr> <tr> <td>No x Quantity</td> <td>$36 \times 3u = 108u$</td> <td>$32 \times 1u = 32u$</td> </tr> </tbody> </table>	[M1]	Large	Small	Number	36	32	Quantity	3u	1u	No x Quantity	$36 \times 3u = 108u$	$32 \times 1u = 32u$		
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No x Quantity	$36 \times 3u = 108u$	$32 \times 1u = 32u$													
<p>$108u + 32u = 140u$ [M1] $\frac{5 \times 6}{9 \times 6} = \frac{30}{54}$ (36L & 32S) $\frac{1 \times 9}{6 \times 9} = \frac{9}{54}$ (bought more L cookies) $30p = 140u$ [M1] $1p = \frac{14}{3}u$ $9p = 42u$ (cost of extra L cookies) $42u + 108u = 150u$ $150u = \\$187.50$ [M1] $1u = \\$1.25$ $32u = \\$1.25 \times 32 = \\40 [A1]</p>															
17	<p>a) $\frac{3}{4} C = \frac{4}{5} N$ $\frac{12}{16} C = \frac{12}{15} N$ [M1]</p> <p>$16u = 160$ $1u = 10$ [M1] $15u = 150$ nuggets [A1]</p> <p>b) $\frac{1}{4}$ of 160 = 40 chicken wings left [M1] $65 - 40 = 25$ $\frac{25}{40} \times 100\% = 62.5\%$ [A1]</p>														