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

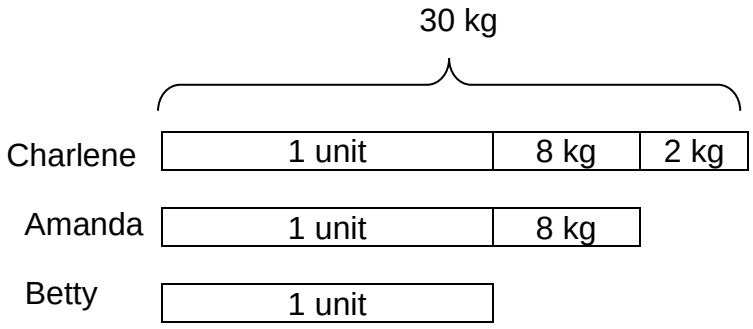
1.	4	**6.**	3	**11.**	4
2.	3	**7.**	2	**12.**	2
3.	3	**8.**	4	**13.**	3
4.	4	**9.**	1	**14.**	1
5.	1	**10.**	4	**15.**	3

Booklet B

Question 16 to 20 : 1 mark each

Questions 21 to 30: 2 marks each

Question	Answer
16	373
17	$11\frac{2}{3}$
18	1, 2, 4, 8
19	0.375
20	128π cm^2
21	55.7 kg
22	Peter : Ian $\frac{2\ (\text{x}\ 3)}{5\ (\text{x}\ 3)}$: $\frac{3\ (\text{x}\ 2)}{4\ (\text{x}\ 2)}$ $\frac{6}{15}$: $\frac{6}{8}$ **[M1]** 15 u – 8 u = 7 u 7 u = 28 1 u = 4 15 u = 15 x 4 = **60 [A1]**
23	Cost of 2 stuffed toys → \$z Cost a stuffed toy → \$($\frac{z}{2}$) **[M1]**

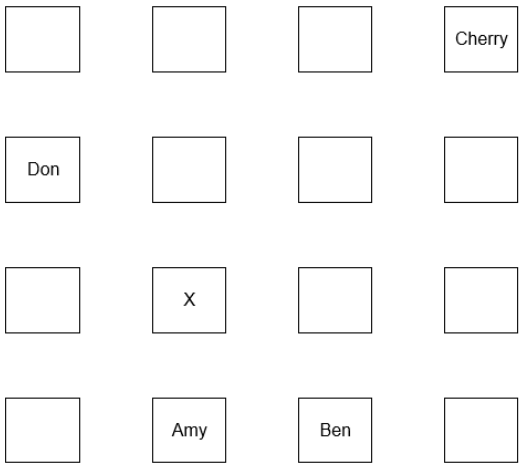
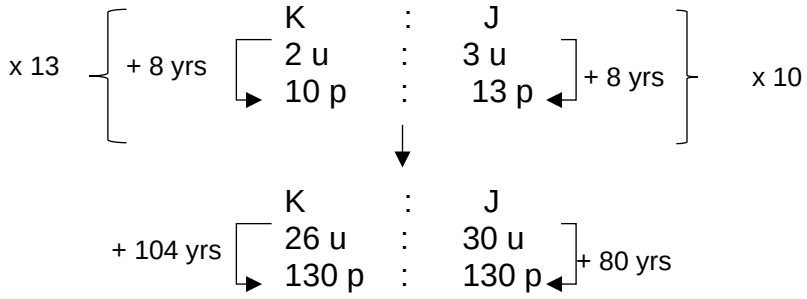
	Cost a robot → \$50 + \$($\frac{z}{2}$) = **\$(50 + $\frac{z}{2}$) [A1]**
24	20 x 2 = 40 **[M1]** 40 ÷ 10 = 4 **[A1]**
25	Area of 1 triangle → $\frac{1}{2}$ x 18 cm x 9 cm = 81 cm^2 **[M1]** Area of 2 triangles (1 square) → 81 cm^2 x 2 = **162 cm^2 [A1]**
26	 1 u = 30 kg – 8 kg – 2 kg = 20 kg Mass of Amanda → 20 kg + 8 kg = 28 kg Mass of Betty → 20 kg Total mass of the 3 girls → 30 kg + 28 kg + 20 kg = 78 kg **[M1]** Average mass of the 3 girls → 78 kg ÷ 3 = 26 kg **[A1]**
27	100% – 15% = 85% Amount of money Farah spent in February → $\frac{85}{100}$ x \$1600 = \$1360 **[M1]** Wendy's monthly salary → \$1360 + 740 = **\$2100 [A1]**
28	5 u = 20 1 u = 4 Length of EB → 5 x 3 = 15 cm **[M1]** Area of shaded part → $\frac{1}{2}$ x 15 x 20 = **150 cm^2 [A1]**
29	Mass of box filled with blue cubes completely → 1.625 kg = 1625 g Mass of box when it is $\frac{4}{7}$ filed with blue cubes → 1.361 kg

	= 1361 g Fraction of blue cubes left to fill the box → $1 - \frac{4}{7}$ $= \frac{3}{7}$ Mass of $\frac{3}{7}$ of blue cubes only → 1625 g – 1361 g = 264 g 3 u = 264 g 1 u = 88 g 7 u = 616 g **[M1]** Mass of empty cubes → 1425 g – 616 g = **809 g [A1]**
30	12 – 3 = 9 Number of walls 1 worker had to paint more → 4 Number of walls 9 workers had to paint more → 4 x 9 = 36 Number of walls 1 worker needed to paint → 36 ÷ 3 = 12 **[M1]** Total number of walls needed to be paint → 12 x 12 = 144 **[A1]**

Paper 2

Questions 1 to 5 : 2 marks each

Question	Answer
1	90 x 90 = 8100 **[M1]** 8100 x 300 x $\frac{1}{3}$ = 810000 = 0.81m^3 **[A1]**
2	**R** **O** **W** 2 (x 3) : 3 (x 3) : 6 : : 5 --- 6 : 9 : 5 **[M1]** Total number of units → 6 + 9 + 5 = 20 u Difference in number of units between red and white buttons → 6 u – 5 u = 1 u 1 u = 25 Total number of buttons → 25 x 25 = **625 [A1]**

3	a) Amy is seated <u>west</u> of Ben. b) 
4	 26 u + 104 = 30 u + 80 4 u = 24 1 u = 6 **[M1]** 6 x 2 u = **12 [A1]**
5	1st → 1 u 2nd → 1 u + 5 3rd → 1 u + 5 + 5 } 165 3 x 5 = 15 **[M1]** 3 u = 165 – 15 3 u = 150 1 u = **50 [A1]**
6	Percentage she paid → 100% - 30% = 70% Cost of vacuum cleaner after discount without 8% GST → $1050 70% → $1050 1% → $17 100% → $1700 **[M1]** Cost of laptop before discount with 8% GST → $1700 Amount of 8% GST → 8% x $1700 = $ 136 **[M1]** $1700 + $ 136 = **$1836 [A1]**

7

Ahmad's mass → 18y kg
Bala's mass → 18y – 6 kg **[M1]**
Average mass of 2 children → $\frac{18y + (18y - 6\text{ kg})}{2}$ **[M1]**
= **(18y – 3) kg [A1]**

8

Radius = 25 cm
Circumference of semi-circle → $\frac{1}{2}$ x 2 x 3.14 x 25 cm
= 78.5 cm **[M1]**

Perimeter of the shaded part → 78.5 + 25 + 25 + 25 + 25 **[M1]**
= **178.5 cm [A1]**

9

B : T : E
12 u : 5 u : 9 u

Bus has 4 wheels
Number of units representing wheels for 12 u of buses
→ 4 x 12 u = 48 u **[M1]**

Tricycle has 3 wheels
Number of units representing wheels for 5 u of tricycles
→ 3 x 5 u = 15 u

E-scooters has 2 wheels
Number of units representing wheels for 9 u of e-scooters
→ 2 x 9 u = 18 u **[M1]**

Total no of units representing wheels → 48 u + 15 u + 18 u = 81 u
1 u → 405 ÷ 81 = 5
Number of vans → 5 x 12 u = 60
Number of bicycles → 6 x 9 u = 45
Total number of vans and bicycles → 60 + 45 = **105 [A1]**

10

a) ∠ADC = 180°- 63 = 117° **[A1]**
b)

Statement	True	False	Not possible to tell
AE is parallel to DF.		X	
EDJH is a trapezium.			X
ABD is an equilateral triangle.	X		

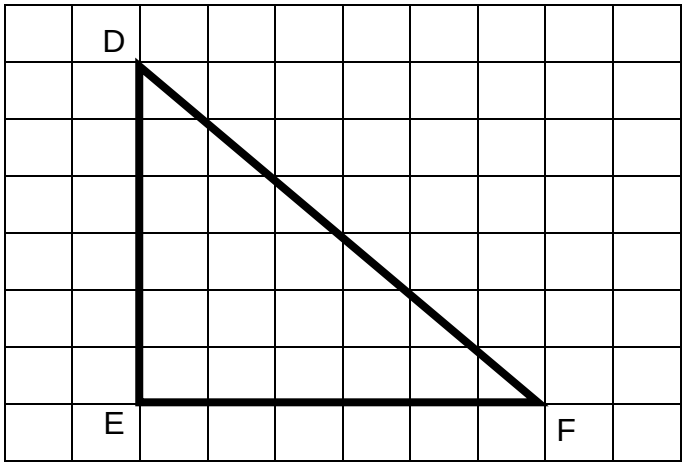
[A2]

11

Danny's toy cars → 5 u
Eugene's toy cars → 7 u

Percentage Danny's toy cars in the end → 100% + 14% = 114%
No of units representing Danny's toy cars in the end
→ $\frac{114}{100}$ x 5 u = 5.7 u **[M1]**

	Percentage of Eugene's toy cars in the end → $\frac{70}{100}$ x 7 u = 4.9 u **[M1]** Difference in the number of units between Danny's and Eugene's toy cars in the end → 5.7 u – 4.9 u = 0.8 u **[M1]** 0.8 u → 280 1 u → 350 Number of toy cars Danny had in the end → 350 x 5.7 u = 1995 **[A1]**
12	Total number of balls at first → 100 Number of additional tennis balls put into the box → 12 Percentage of baseballs taken out → 50% Total number of balls in the end → 102 Number of baseballs taken out → 100 + 12 – 102 = 10 **[M1]** 50% of baseballs → 10 100% of baseballs → 10 x 2 = 20 **[M1]** Number of baseballs at first → 20 Number of tennis balls at first → 100 – 20 = 80 **[M1]** Number of tennis balls in the end → 80 + 12 = 92 Percentage increase in tennis balls → $\frac{92-80}{80}$ x100% = 15%**[A1]**
13	Breadth of rectangle = $\frac{1}{3}$ x 60 = 20 cm **[M1]** Base of triangle = 60 – 10 = 50 cm Area of triangle = $\frac{1}{2}$ x 50 x 20 = 500 cm^2 **[M1]** Area of semi-circle = $\frac{1}{2}$ x 3.14 x 10 x 10 = 157 cm^2 **[M1]** Area of shaded part = 500 + 157 = 657 cm^2 **[A1]**
14	$1 - \frac{2}{5} - \frac{1}{3} = \frac{4}{15}$ $\frac{1}{2}$ x $\frac{4}{15} = \frac{2}{15}$ **[M1]** 2 u → 240 cm^2 1 u → 120 cm^2 15 u → 1800 cm^2 **[M1]** Length (2B) x Breadth (B) = 1800 cm^2 2B^2 = 1800 cm^2 B = 30 cm **[M1]** Perimeter = 60 + 60 + 30 + 30 = **180 cm [A1]**

15	a) $\frac{1}{2}$ x 4 x 6 = 12 cm^2 **[A1]** b) **[A3]** 
16	B : C 40% : 60% Percentage of Billy's share now → $\frac{20}{100}$ x 40% more → 8% more → 40% + 8% more = 48% **[M1]** 48% → \$62.40 1% → \$1.30 Percentage of Charlie's share now → $\frac{20}{100}$ x 60% more → 12% more → 60% + 12% more = 72% **[M1]** 72% → \$1.30 x 72 = \$93.60 Total percentage Billy and Charlie had to pay → 48% + 72% = 120% **[M1]** Total amount of money Billy and Charlie had to pay → \$62.40 + \$93.60 = \$156 **[M1]** 120% → \$156 1% → \$ 1.30 100% → \$130 **[A1]**
17	(a) LCM of (12, 15) = 2 x 2 x 3 x 5 = 60 **[M1]** No of packs of cakes = $\frac{60}{15}$ x 6 = 24 **[M1A1]** (b) No of packs Violet bought = $\frac{84}{112}$ x 4 = \$28 **[M1]** No of cupcakes = 28 x 8 = 224 224 – 20 = 204

	204 – 88 = 116 116 – 20 = 96 **[M1]** No of packs Daisy bought = $\frac{96}{8}$ = 12 **[A1]**