

**Index
Number:**

MINISTRY OF EDUCATION

FIJI YEAR 8 EXAMINATION 2022

MATHEMATICS

**DETAILED SOLUTION
OF
MARKING SCHEME**

**HAND IN THIS ANSWER BOOKLET TO THE
SUPERVISOR BEFORE YOU LEAVE THE
EXAMINATION ROOM.**

For official use only

PIN:

Mark

Gained:

SECTION A MULTIPLE – CHOICE QUESTIONS**[40 marks]****Circle** the letter of the **best** answer.

1	A	B	C	<input checked="" type="radio"/> D
2	A	<input checked="" type="radio"/> B	C	D
3	A	B	<input checked="" type="radio"/> C	D
4	<input checked="" type="radio"/> A	B	C	D
5	A	B	<input checked="" type="radio"/> C	D
6	<input checked="" type="radio"/> A	B	C	D
7	A	B	C	<input checked="" type="radio"/> D
8	A	B	<input checked="" type="radio"/> C	D
9	A	B	<input checked="" type="radio"/> C	D
10	<input checked="" type="radio"/> A	B	C	D
11	A	B	C	<input checked="" type="radio"/> D
12	A	B	C	<input checked="" type="radio"/> D
13	A	B	<input checked="" type="radio"/> C	D
14	A	<input checked="" type="radio"/> B	C	D
15	<input checked="" type="radio"/> A	B	C	D
16	A	B	C	<input checked="" type="radio"/> D
17	A	B	<input checked="" type="radio"/> C	D
18	A	B	C	<input checked="" type="radio"/> D
19	<input checked="" type="radio"/> A	B	C	D
20	A	B	<input checked="" type="radio"/> C	D

SECTION B**[60 marks]**

1.	(a)		(f)	
	Ans: <u>776 003</u>	(1)	Ans: <u>64cm²</u>	(1)
	(b)		(g)	
	Ans: <u>-2</u>	(1)	Ans: $\frac{1}{3}$	(1)
	(c)		(h)	
	Ans: Associative Property	(1)	Ans: 135 minutes	(1)
	(d)		(i)	
	Ans: 19.817	(1)	Ans: 4	(1)
	(e)		(j)	
	Ans: 9	(1)	Ans: 180°	(1)

Turn Over

SECTION B (continued)

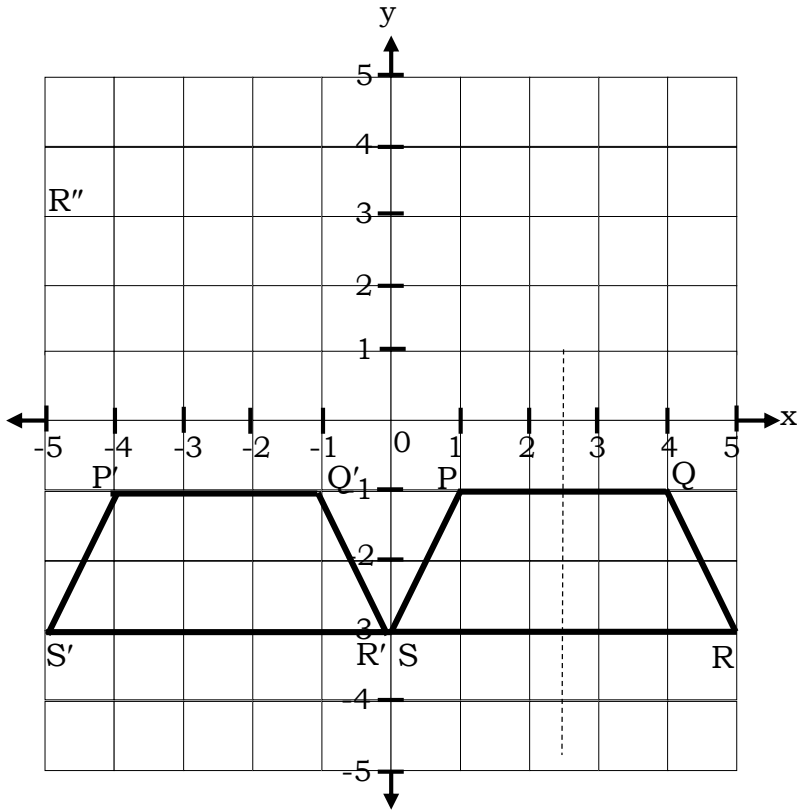
2.	<p>(a) $F(18) = \{1, 2, 3, 6, 9, 18\}$</p> <p>(b) HCF of 8 and 24 is 8</p> <p>$F(8) = \{1, 2, 4, \underline{8}\}$ $F(24) = \{1, 2, 3, 4, 6, \underline{8}, 12, 24\}$</p>	<p>(1)</p> <p>(2)</p>
3.	<p>(a) Ans: $\frac{3}{5}$</p> <p>(b) $\frac{2}{5} \times \frac{280}{1} = \frac{560}{5} = 112$ Ans: 112 students</p>	<p>(1)</p> <p>(2)</p>
4.	<p>(a) The pattern follows the following rule to get the missing numbers</p> <ul style="list-style-type: none"> • Multiply by 4 • Add 2 • Subtract 1 <p style="text-align: center;">Ans: $r = 16$ $s = 18$ $t = 17$</p>	<p>(3)</p>
5.	<p>Volume of the cylinder = $\frac{1}{2} \pi r^2 \times \text{height}$</p> $= \frac{1}{2} \times \frac{22}{7} \times \frac{7}{1} \times \frac{7}{1} \times \frac{10}{1}$ $= \frac{10780}{14}$ $= 770\text{cm}^3$ <p style="text-align: right;">Ans: 770 cm³</p>	<p>(3)</p>
6.	<p>a) A 6-sided figure is a hexagon. Ans: Hexagon/Irregular hexagon</p> <p>b) Angle round a point is 360° To add up the angles clockwise - $45^\circ + 90^\circ + 90^\circ + 45^\circ = 270^\circ$ Ans: $w = 270^\circ$</p>	<p>(1)</p> <p>(2)</p>

7.	<p>(a) 12 students like volleyball alone, 16 like both volleyball and soccer. Total = 12 + 16 Ans: 28 students</p> <p>(b) 11 students neither like volleyball nor soccer as they are placed in the Universal set Ans: 11 students</p> <p>(c) The number of students who like soccer will be determined by the total number of students who:</p> <ul style="list-style-type: none"> • like volleyball alone -12 • like both volleyball and soccer -16 • neither like volleyball nor soccer - 11 • Total =39 <p>The total number of students in class is 46, subtract 39 = 7. Only 7 students like soccer alone.</p> <p style="text-align: right;">Ans: 7 students</p>	<p>(1)</p> <p>(1)</p> <p>(1)</p>
8.	<p>(a) The final time to reach Suva is 10.30am after travelling for 3 hours. Ans: 10.30am</p> <p>(b)</p> $\begin{aligned} \text{Average speed} &= \frac{\text{Distance}}{\text{time}} \\ &= \frac{240}{3} \\ &= 80\text{km/hour} \end{aligned}$ <p style="text-align: right;">Ans:80km/hour</p>	<p>(2)</p> <p>(2)</p>
9.	<p>(a) The polygon has 8 sides so it's an octagon Ans: Regular Octagon/Octagon</p> <p>(b) Each interior angle of a regular octagon is 135° To calculate the missing angle: 360° - 135° = 225° 360° is sum of angle round a point Ans: x = 225°</p> <p>(c) The angle is a reflex angle as it is more than 180° but less than 360° Ans: Reflex angle</p>	<p>(1)</p> <p>(3)</p> <p>(1)</p>
10.	<p>(a) Simple Interest = $\frac{P \times R \times T}{100}$</p> $\begin{aligned} &= \frac{4500 \times 9 \times 2}{100} \\ &= 45 \times 18 \\ &= \$810 \end{aligned}$ <p style="text-align: right;">Ans: \$810.00</p> <p>(b) Amount = P + I = \$4500 + \$810 \$5310 Ans: \$5 310.00</p>	<p>(2)</p> <p>(2)</p>

11.	<p>(a) Counting the number of tallies which is 9 <i>Ans: m = 9</i> (1)</p> <p>(b) Scoring marks between 50 and 90 $3 + 10 + 1 = 14$ The marks for 50 and 90 are excluded because the word between is being used in the question. <i>Ans: 14 students</i> (2)</p> <p>(c) The answer is determined from the frequency for the most score attained <i>Ans: 70</i> (1)</p>	
12.	<p>(a) Convert 20cm x 20cm to meter will be 0.2 x 0.2 $A = l \times w$ $0.2 \times 0.2 = 0.04$ <i>Ans: 0.04m</i> (2)</p> <p>(b) Step 1: Calculate the area of tiles $600 \text{ cm} \times 500 \text{ cm} = 300\,000 \text{ cm}^2$ Step 2: Area of a tile is $0.04 \text{ m}^2 = 400 \text{ cm}^2$ Step 3: The total tiles needed = $\frac{\text{Area of floor}}{\text{Area of a tile}}$ $= \frac{300\,000}{400}$ $= 750 \text{ tiles}$ <i>Ans: 750 tiles</i> (2)</p> <p>(c) Cost = 750 tiles x \$0.80 = \$600 <i>Ans: \$ 600</i> (1)</p>	
13.	<p>(a) Radius is the $\frac{1}{2}$ the length of the diameter. So 28cm is the diameter so the radius is 14cm <i>Ans: 14 cm</i> (1)</p> <p>(b) (i) Circumference = πd or $2\pi r$ $= \frac{22}{7} \times \frac{28}{1}$ $2 \times \frac{22}{7} \times \frac{14}{1}$ $= 88 \text{ cm}$ $= 88 \text{ cm}$ <i>Ans : 88 cm</i> (2)</p> <p>(ii) Area of Sector = $\frac{A}{360} \pi r^2$ $\frac{120}{360} \times \frac{22}{7} \times \frac{14}{1} \times \frac{14}{1}$ 205.33 cm^2 <i>Ans: 205.33 cm²</i> (2)</p>	

14.

(a)



(3)

(2)

THE END