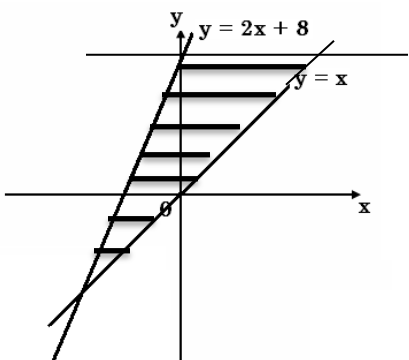
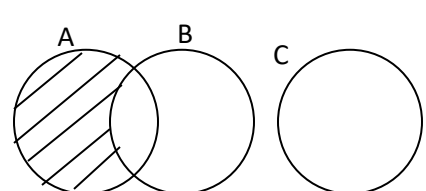
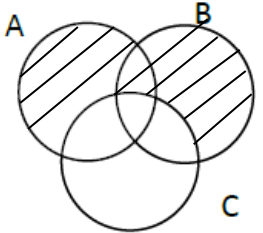


MATHS SPM SEMINAR - ANSWERS

SIMULTANEOUS LINEAR EQUATIONS	
1. Area = 48 cm^2	
2. X = 75 Y = 105	
3. a) $4x + 3y = 68$, $x + 2y = 32$ b) $x = 8$ $y = 12$	
SOLID GEOMETRY	
1. RM 3394	
2. 8.67 cm	
QUADRATIC EXPRESSION & EQUATIONS	
1. 10 m	
2. 28 cm	
3. a) $16x^2 \text{ cm}^2$ b) $L = (pq - 16x^2) \text{ cm}^2$ c) $2x(p - 4x)(q - 4x) \text{ cm}^3$	
MATHEMATICAL REASONING	
1. a) False b) i. If $x^3 = -64$, then $x = -4$ c) 120° ii. If $x = -4$, then $x^3 = -64$	
2. a) Some b) 23 is not a multiple of 3 c) $3(2)^n + n$, $n = 1, 2, 3, \dots$ d) i. If $p - q > 0$, then $p > q$ ii. If $p > q$, then $p - q > 0$	
3. i) $a = 6$ ii) $p = n + 2$ $b = 20$ $q = 5n$ $c = 16$ $r = n^2$ $d = 42$ $s = (n + 2) + 5n + n^2$	
THE STRAIGHT LINE	
1. $y = \frac{3}{4}x + \frac{65}{4}$, $\frac{65}{4} \text{ cm}$	
2. a) $x = 2$ b) $y = 2x - 1$	
3. a) Num of pages : 40, 55, 70 b) $J = 15h - 5$ c) Draw graph d) 28 days	
GRAPH OF FUNCTIONS II/SETS	
1.	2. $x < 3$, $y \leq 2x + 2$, $y \geq -x + 2$
	
3. a) $x = 2$ b) $y = 12$ c) 4 students d) 35 students	

<p>4. a)</p> 	<p>b)</p> 
<p>LINES & PLANES IN 3-DIMENSION</p>	
<p>1. a) Angle MAE/EAM b) 15.5°</p>	
<p>2. a) Angle PRU/URP b) 34.7°</p>	
<p>MATRICES</p>	
<p>1. a) $x = 2$ b) $p = 3/2$ $q = 1$</p>	
<p>2. a) $\begin{pmatrix} 40 & 60 \\ 30 & 70 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 130 \\ 135 \end{pmatrix}$ b) $x = 1$ $y = 1.5$</p>	
<p>GRADIENT AND AREA UNDER A GRAPH</p>	
<p>1. a) 20 ms^{-1} b) 2 ms^{-2} c) 10 s</p>	
<p>2. a) i. $1300/1\text{pm}$ ii. Draw the graphs b) 357.5 km c) 79.44 km^{-1}</p>	
<p>3. a) i. $m = 80$ $n = 90$ b) 66.67 km/h ii. Draw graph</p>	
<p>PROBABILITY</p>	
<p>1. Sample space a) $3/10$ b) $7/10$</p>	
<p>2. a) Sample space b) i. $1/2$ ii. $1/6$</p>	
<p>3. a) $4/15$ b) $1/12$ c) $29/90$</p>	
<p>CIRCLES I & II</p>	
<p>1. a) 243.8 cm^2 b) 104.3 cm</p>	
<p>2. a) 325.7 m b) 5257 m^2</p>	