Section B

Answer **all** questions.

(20 marks)

1. Match the number sequences with the correct pattern.

(4 marks)

Number sequences	Pattern
4,8,12,16,…	$2n + 2$, n=1,2,3,…
1,8,27,64,…	$4n - 1$, n=1,2,3,…
3,7,11,15,…	$4n$, n=1,2,3,…
4,6,8,10,…	n^3, n=1,2,3,…

2. Complete the following sequence by filling in the blanks.

(4 marks)

a.

		1			
	1	1			
	1	2	1		
	1	3	3	1	
1	4		4	1	
1	5	10	10		1

b. 1, ___ , 2, 3, 5, ___ , …..

3. Mark (/) for the sequence and (x) if not a sequence.

(4 marks)

a. -10, -6, -7, 1, -12, 3,… ☐

b. -2, -4, -8, -16, -32,… ☐

c. $\frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{5}{8}, \frac{3}{4}, \ldots$ ☐

d. 0.04, 0.16, 0.64, 2.56,… ☐

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4. Match each of the following algebraic expression with the correct answer.

(4 marks)

$\left(\frac{a}{4}\right)^2$
$\left(-\frac{a}{2}\right)\times\left(-\frac{a}{3}\right)$
$\left(-\frac{a}{2}\right)\times\left(-\frac{a}{2}\right)$
$\left(\frac{a}{3}\right)^2$

$\frac{a^2}{4}$
$-\frac{a^2}{9}$
$-\frac{a^2}{6}$
$\frac{a^2}{16}$
$\frac{a^2}{9}$

5. Complete the factorisation using cross multiplication method using the correct method.

(4 marks)

$2r^2 - 5rs - 3s^2 = (2r + s)($_____$)$

2r	s	_____
_____	-3s	-6rs
$2r^2$	$3s^2$	_____

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