

Section B
Answer **all** questions.
(20 marks)

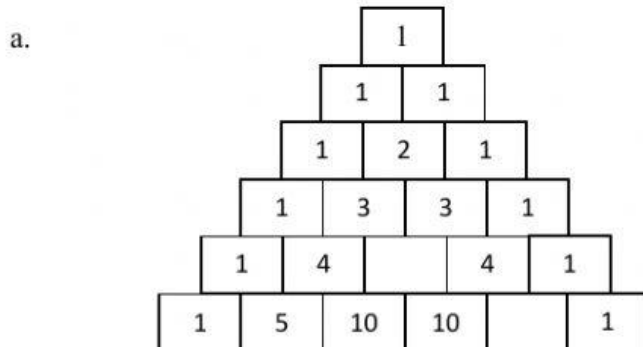
1. Match the number sequences with the correct pattern.

(4 marks)

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

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

(4 marks)



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,... | <input style="width: 50px; height: 25px;" type="text"/> |
| b. -2, -4, -8, -16, -32,... | <input style="width: 50px; height: 25px;" type="text"/> |
| c. $\frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{5}{8}, \frac{3}{4}, \dots$ | <input style="width: 50px; height: 25px;" type="text"/> |
| d. 0.04, 0.16, 0.64, 2.56,... | <input style="width: 50px; height: 25px;" type="text"/> |

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)

$$2r^2 - 5rs - 3s^2 = (2r + s)(\underline{\hspace{2cm}})$$

