FORM 1
CHAPTER 9

Summative Practice

Section A

1 An octagon has 8 sides.
Answer: **C**

2 A heptagon has 7 vertices and 14 diagonals.
Answer: **D**

3 All the interior angles of an equilateral triangle = 60°

$$\begin{aligned} 5w + 60° &= 180° \\ 5w &= 120° \\ w &= 24° \end{aligned}$$

Answer: **A**

4

$$\begin{aligned} \angle NPR &= \angle QNP \\ &= 180° - 77° \\ &= 103° \\ \angle POR &= 41° \\ r + 103° + 41° &= 180° \\ r &= 36° \end{aligned}$$

Answer: **B**

5

$$\begin{aligned} \angle CBF &= 180° - 78° \\ &= 102° \\ 102° + x + 2x + 3x &= 360° \\ 102° + 6x &= 360° \\ 6x &= 258° \\ x &= 43° \end{aligned}$$

Answer: **A**

6

$$\begin{aligned} \angle Q &= 69° \\ z &= \angle QOP \\ &= 180° - 32° - 69° \\ &= 79° \end{aligned}$$

Answer: **D**

Section B

1 (a) Heptagon
(b) 7
(c) 7
(d) 14

2 (a) False
(b) True
(c) True
(d) False

Section C

1 (a)

$$\begin{aligned} \angle LNM &= \angle LMN \\ &= 45° \\ x &= 180° - 45° \\ &= 135° \end{aligned}$$

(b)

$$\begin{aligned} \angle TWV + \angle TVW &= 90° \\ s + 90° + 41° + 100° + 103° &= 360° \\ s &= 26° \end{aligned}$$

(c)

$$\begin{aligned} \angle ABD &= \angle ADB \\ &= 59° \\ x + 59° + 59° &= 180° \\ x &= 62° \end{aligned}$$

$$\begin{aligned} \angle ECD &= 180° - 113° \\ &= 67° \\ y + 67° + 59° &= 180° \\ y &= 54° \end{aligned}$$

$$\begin{aligned} x - y &= 62° - 54° \\ &= 8° \end{aligned}$$

(d)

$$\begin{aligned} \angle BCG + 55° + 88° &= 180° \\ \angle BCG &= 37° \\ y &= \angle BCG \\ &= 37° \\ x &= y + \angle BCG \\ &= 37° + 37° \\ &= 74° \end{aligned}$$