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Exercise 9A

Question 1:

Let the fourth angle be x.

We know, that sum of the angles of a quadrilateral is $360°$

Then, $56° + 115° + 84° + x = 360°$

$\Rightarrow 255° + x = 360°$

$\Rightarrow x = 360° - 255° = 105°$

$\therefore$ The fourth angle is $105°$.

Question 2:

Let the angles of a quadrilateral be 2x, 4x, 5x and 7x.

We know, that sum of the angles of a quadrilateral is $360°$

Then, $2x + 4x + 5x + 7x = 360°$

$\Rightarrow 18x = 360°$

$\Rightarrow x = \frac{360}{18} = 20°$

$\therefore$ the angles of the quadrilateral are:

$2x = 2 \times 20 = 40°$

$4x = 4 \times 20 = 80°$

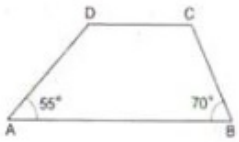
$5x = 5 \times 20 = 100°$

$7x = 7 \times 20 = 140°$

$\therefore$ the required angles are $40°, 80°, 100°$ and $140°$.

Question 3:

Since AB || DC



Since AB || DC, $\angle A$ and $\angle D$ are consecutive interior angles.

Consecutive interior angles sum upto $180°$.

So, $\angle A + \angle D = 180°$

$\Rightarrow 55° + \angle D = 180°$

$\Rightarrow \angle D = 180° - 55° = 125°$

Also, we know that, sum of the angles of a quadrilateral is $360°$

$\Rightarrow \angle A + \angle B + \angle C + \angle D = 360°$

$\Rightarrow 55° + 70° + \angle C + 125° = 360°$

$\Rightarrow 250° + \angle C = 360°$

$\Rightarrow \angle C = 360° - 250° = 110°$

$\therefore \angle C = 110°$ and $\angle D = 125°$

********** END **********