



Exercise 4D

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Question 1:

Since, sum of the angles of a triangle is 180°

$$\angle A + \angle B + \angle C = 180^\circ$$

$$\Rightarrow \angle A + 76^\circ + 48^\circ = 180^\circ$$

$$\Rightarrow \angle A = 180^\circ - 124^\circ = 56^\circ$$

$$\therefore \angle A = 56^\circ$$

Question 2:

Let the measures of the angles of a triangle are $(2x)^\circ$, $(3x)^\circ$ and $(4x)^\circ$.

Then, $2x + 3x + 4x = 180$ [sum of the angles of a triangle is 180°]

$$\Rightarrow 9x = 180$$

$$\Rightarrow x = 180/9 = 20$$

\therefore The measures of the required angles are:

$$2x = (2 \times 20)^\circ = 40^\circ$$

$$3x = (3 \times 20)^\circ = 60^\circ$$

$$4x = (4 \times 20)^\circ = 80^\circ$$

Question 3:

Let $3\angle A = 4\angle B = 6\angle C = x$ (say)

Then, $3\angle A = x$

$$\Rightarrow \angle A = \frac{x}{3}$$

$$4\angle B = x$$

$$\Rightarrow \angle B = \frac{x}{4}$$

$$\text{and } 6\angle C = x$$

$$\Rightarrow \angle C = \frac{x}{6}$$

$$\text{As } \angle A + \angle B + \angle C = 180^\circ$$

$$\Rightarrow \frac{x}{3} + \frac{x}{4} + \frac{x}{6} = 180$$

$$\Rightarrow \frac{4x + 3x + 2x}{12} = 180$$

$$\Rightarrow 9x = 180 \times 12$$

$$\Rightarrow x = \frac{180 \times 12}{9} = 240$$

$$\therefore \angle A = \frac{x}{3} = \frac{240}{3} = 80^\circ$$

$$\angle B = \frac{x}{4} = \frac{240}{4} = 60^\circ$$

$$\angle C = \frac{x}{6} = \frac{240}{6} = 40^\circ$$

***** END *****