Exercise 4A

Question 8:

Let the required angle be $x^o$

Then its supplement is $180^o - x^o$

$$\Rightarrow \quad x^o = \left(180^o - x^o\right) - 25^o$$
$$\Rightarrow \quad x^o + x^o = 180^o - 25^o$$
$$\Rightarrow \quad 2x = 155$$
$$\Rightarrow \quad x = \frac{155}{2} = 77\frac{1}{2}$$

$\therefore$ The measure of an angle which is $25^o$ less than its supplement is $77\frac{1}{2}^o = 77.5^o$.

Question 9:

Let the required angle be $x^o$

Then, its complement = $90^o - x^o$

$$\Rightarrow \quad x^o = 4\left(90^o - x^o\right)$$
$$\Rightarrow \quad x^o = 360^o - 4x^o$$
$$\Rightarrow \quad 5x = 360$$
$$\Rightarrow \quad x = \frac{360}{5} = 72$$

$\therefore$ The required angle is $72^o$.

Question 10:

Let the required angle be $x^o$

Then, its supplement is $180^o - x^o$

$$\Rightarrow \quad x^o = 5\left(180^o - x^o\right)$$
$$\Rightarrow \quad x^o = 900^o - 5x^o$$
$$\Rightarrow \quad x + 5x = 900$$
$$\Rightarrow \quad 6x = 900$$
$$\Rightarrow \quad x = \frac{900}{6} = 150.$$

$\therefore$ The required angle is $150^o$.

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