Exercise 4A

Question 6:

(i) Let the required angle be x^o

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

$$\therefore \quad x^o = 90^o - x^o$$
$$\Rightarrow \quad x + x = 90$$
$$\Rightarrow \quad 2x = 90$$
$$\Rightarrow \quad x = \frac{90}{2} = 45$$

$\therefore$ The measure of an angle which is equal to its complement is 45^o.

(ii) Let the required angle be x^o

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

$$\therefore \quad x^o = 180^o - x^o$$
$$\Rightarrow \quad x + x = 180$$
$$\Rightarrow \quad 2x = 180$$
$$\Rightarrow \quad x = \frac{180}{2} = 90$$

$\therefore$ The measure of an angle which is equal to its supplement is 90^o.

Question 7:

Let the required angle be x^o

Then its complement is $90^o - x^o$

$$\Rightarrow \quad x^o = (90^o - x^o) + 36^o$$
$$\Rightarrow \quad x^o + x^o = 90^o + 36^o$$
$$\Rightarrow \quad 2x^o = 126^o$$
$$\Rightarrow \quad x = \frac{126}{2} = 63$$

$\therefore$ The measure of an angle which is 36^o more than its complement is 63^o.

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