

Test

Q1
Sol Acute Angle

Q2
Sol Let one angle be x . The complement of this angle $= 90^\circ - x$.

Sum of complementary angle is 90° .

$$x = 90^\circ - x + 14$$

$$2x = 104^\circ$$

$$x = \frac{104^\circ}{2}$$

$$x = 52^\circ$$

Hence other angle will be $90^\circ - 52^\circ = 38^\circ$

Q3
Sol Linear pair is 180°

$$\therefore x = 180^\circ - 111^\circ = 69^\circ$$

Now $(x+7)^\circ$

$$x = 69 - 7$$

$$x = 62^\circ$$

Q4-

Sol.

Ratio of three angles = 2 : 3 : 7

Let first angle = $2x$

Second angle = $3x$

Third angle = $7x$

$$\therefore 2x + 3x + 7x = 180^\circ$$

$$12x = 180^\circ$$

$$x = \frac{180^\circ}{12}$$

$$x = 15^\circ$$

$$\therefore \text{First angle} = 2 \times 15 = 30^\circ$$

$$\text{Second angle} = 3 \times 15 = 45^\circ$$

$$\text{Third angle} = 7 \times 15 = 105^\circ$$

Q5
Sol.

Let one angle be x . The complement of this angle is $(90^\circ - x)$.

Sum of complementary angle is 90° .

$$x = 90^\circ - x + 26$$

$$2x = 116^\circ$$

$$x = \frac{116^\circ}{2}$$

$$x = 58^\circ$$

Hence other angle will be ~~58~~ $90^\circ - 58^\circ = 32^\circ$

$$58^\circ + 32^\circ = 90^\circ$$

Q6

Sol.

~~Let $x = 30^\circ$~~ In the given figure $\angle EFA = 180^\circ$. (Straight angle)

$$\begin{aligned} \angle AOF &= 180^\circ - 150^\circ \\ &= 30^\circ \end{aligned}$$

~~\therefore , the value of x is~~

\therefore , $\angle = x = 30^\circ$ (Vertically opposite angle)

\therefore , value of $x = 30^\circ$

Q7-
Sol-

$$\begin{aligned}x+x+x &= 360^\circ \\3x &= 360^\circ \\x &= \frac{360^\circ}{3}\end{aligned}$$

$$x = 120^\circ$$

Q8-
Sol-

$$\angle POY = 90^\circ$$

$$\angle O = \angle D = 90^\circ \text{ (V.O.A)}$$

$$\angle D = 90^\circ$$

$$\angle D = \frac{90^\circ}{2}$$

$$\angle D = 45^\circ$$

$$\angle MOX = 45^\circ$$

$$\angle POY = 90^\circ \text{ (given)}$$

$$\angle XON = 180^\circ - 40^\circ$$

$$\angle XON = 90^\circ$$

$$\angle O = \angle a = 90^\circ \text{ (V.O.A)}$$

$$\angle a = \frac{90^\circ}{3}$$

$$\angle a = 60^\circ$$

$$60^\circ + \angle c = 180^\circ$$

$$\angle c = 180^\circ - 120^\circ$$

$$\angle c = 60^\circ$$

$$\angle c = 50^\circ$$

$$a + c = 120^\circ$$

Q9-

Sol-

Q10-

Sol- Complementary angle = 90° .

i) $78^\circ + x = 90^\circ$

$$x = 90^\circ - 78^\circ$$

$$x = 12^\circ$$

$$\begin{aligned} \text{ii) } 59^\circ + x^\circ &= 90^\circ \\ x &= 90^\circ - 59 \\ x &= 31 \end{aligned}$$

$$\begin{aligned} \text{iii) } 62^\circ + x &= 90^\circ \\ x &= 90^\circ - 62^\circ \\ x &= 28^\circ \end{aligned}$$