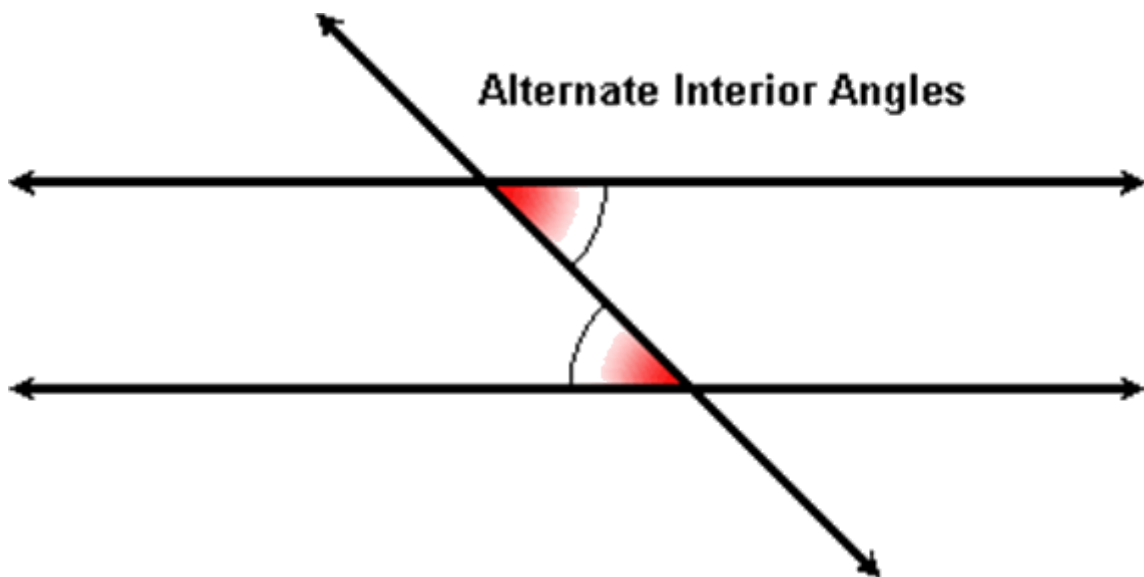


**FlexiPrep****NCERT Class 7 Mathematics Solutions: Chapter 5 – Linear and Angles Exercise 5.2 Part 2 (For CBSE, ICSE, IAS, NET, NRA 2022)**

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1. In the adjoining figure,  $p \parallel q$  . Find the unknown angles.



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Answer:

Given,

$p \parallel q$  and cut by a transversal line.

$$\therefore 125^\circ + e = 180^\circ \text{ [Linear pair]}$$

$$\therefore e = 180^\circ - 125^\circ$$

$$\rightarrow e = 55^\circ \dots \text{eq (i)}$$

Now,

$$e = f = 55^\circ \text{ [Vertically opposite angle]}$$

Also,

$$a = f = 55^\circ \text{ [Alternate interior angles]}$$

$$a + b = 180^\circ \text{ [Linear pair]}$$

$$\rightarrow 55^\circ + b = 180^\circ \text{ [From eq (1) ]}$$

$$\rightarrow b = 180^\circ - 55^\circ$$

$$\rightarrow b = 125^\circ$$

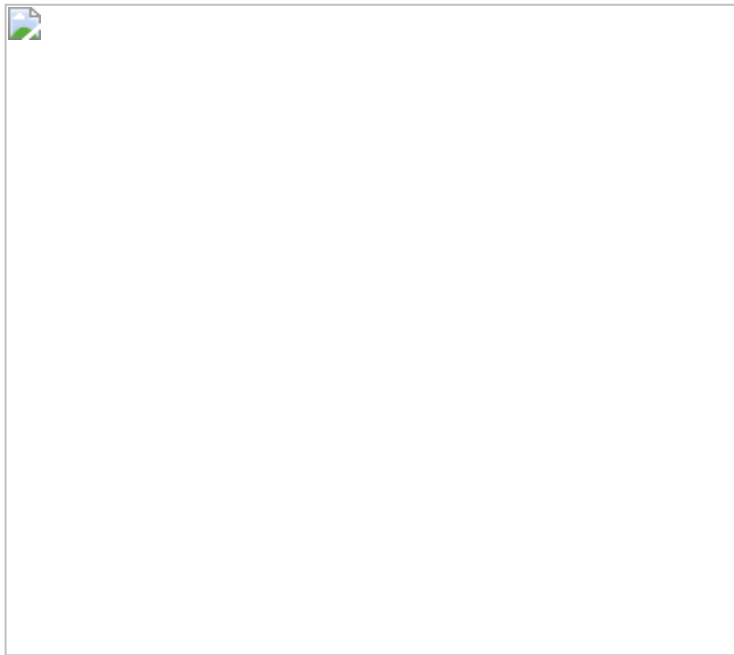
Now,

$$a = c = 55^\circ \text{ and } b = d = 125^\circ \text{ [Vertically opposite angle]}$$

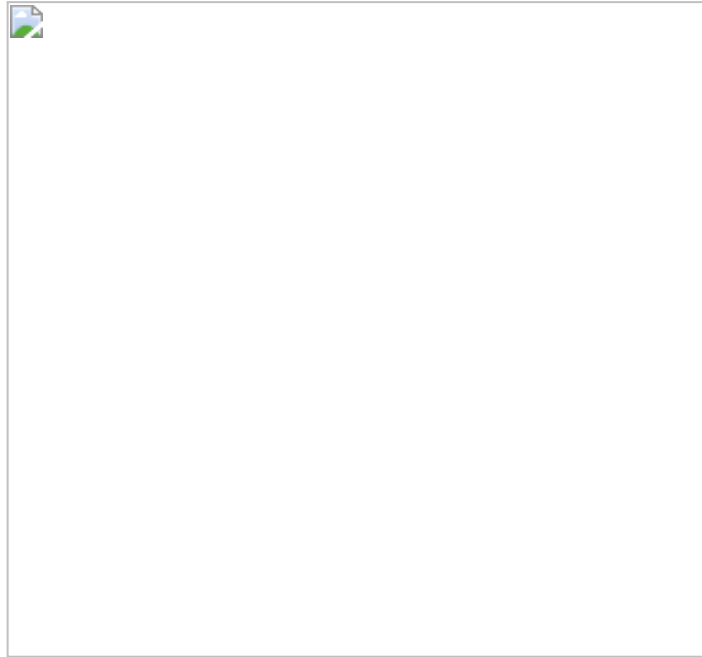
So,

$$a = 55^\circ, b = 125^\circ, c = 55^\circ, d = 125^\circ, e = 55^\circ \text{ and } f = 55^\circ$$

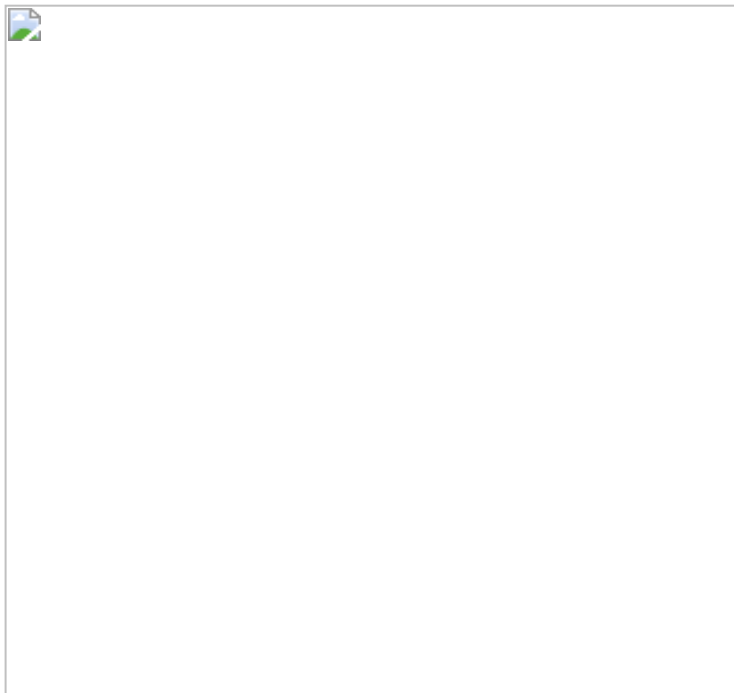
2. Find the value of  $x$  in each of the following figure if  $l \parallel m$ .



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Answer:

(i) Given,

$l \parallel M$  and  $t$  is transversal line.

$\therefore$  Interior vertically opposite angle between lines  $l$  and  $t = 110^\circ$ .

$\therefore 110^\circ + x = 180^\circ$  [Supplementary angles]

$$\rightarrow x = 180^\circ - 110^\circ = 70^\circ$$

(ii) Given,

$l \parallel m$  and  $t$  is transversal line.

$$x + 2x = 180^\circ \text{ [Interior opposite angles]}$$

$$\rightarrow 3x = 180^\circ$$

$$\rightarrow x = \frac{180^\circ}{3}$$

$$\rightarrow x = 60^\circ$$

(iii) Given,

$$l \parallel m \text{ and } a \parallel b$$

$$x = 100^\circ \text{ [Corresponding angles]}$$

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