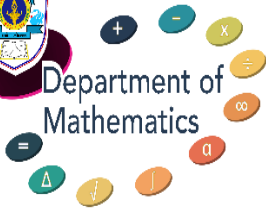




Department of  
Mathematics



# INDIAN SCHOOL AL WADI AL KABIR

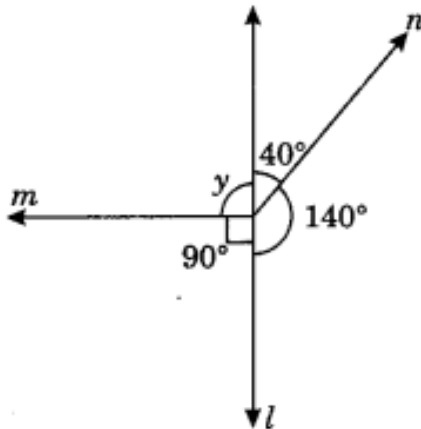
Class VII, Mathematics (2022-23)

## Worksheet DTQ – LINES AND ANGLES

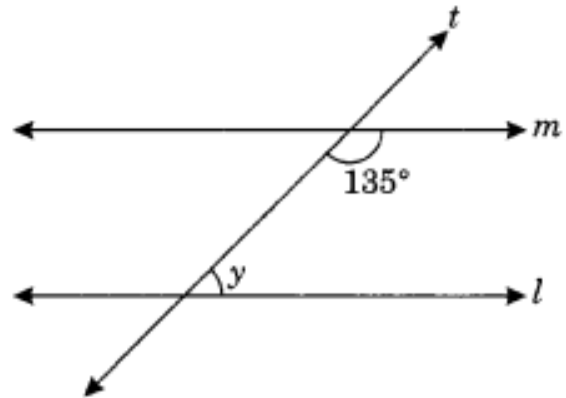
### SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

**Q1.** Find the value of  $y$ .

a)



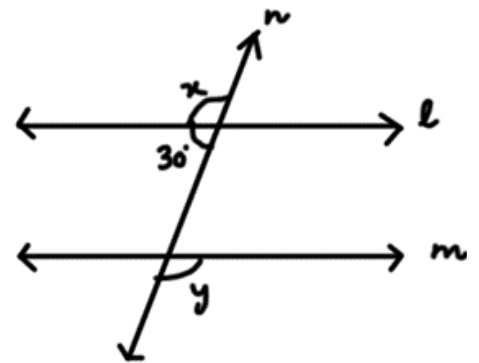
b)



**Q2.** Find the complement and supplement of  $57^\circ$ .

**Q3.** Two complementary angles are in the ratio 4:5. Find the measure of each angles.

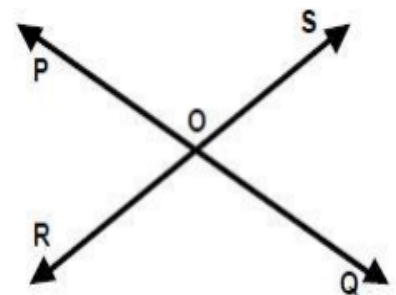
**Q4.** In the given figure  $l \parallel m$ , and  $n$  is the transversal. Find the measure of the unknown angles  $x$  and  $y$ .



**Q5.** In the given fig.  $\angle POS = 118^\circ$ . Find the measure of:

i)  $\angle POR$

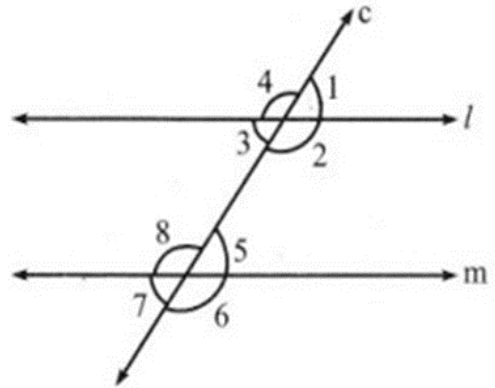
ii)  $\angle ROQ$



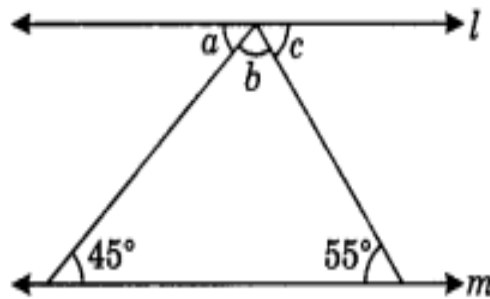
<p><b>Q6.</b></p>	<p>Fill in the blanks:</p> <p>i) A line that cuts across two or more lines in distinct points is called _____.</p> <p>ii) The angle which is equal to its complement is _____.</p>
<p><b>Q7.</b></p>	<p>If the angles <math>(4x + 4)^\circ</math> and <math>(6x - 4)^\circ</math> are the supplementary angles, find the value of <math>x</math>.</p>

**SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)**

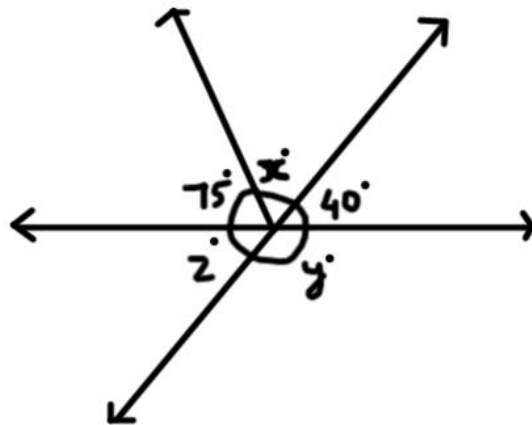
<p><b>Q8.</b></p>	<p>State the property that is used in each of the following statements:</p> <p>i) If <math>l \parallel m</math>, then <math>\angle 1 = \angle 5</math></p> <p>ii) If <math>\angle 2 = \angle 8</math> then, <math>l \parallel m</math></p> <p>iii) If <math>\angle 2 + \angle 5 = 180^\circ</math> then, <math>l \parallel m</math></p>
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<p><b>Q9.</b></p>	<p>In the given figure <math>l \parallel m</math>. Find the values of <math>a</math>, <math>b</math> and <math>c</math>.</p>
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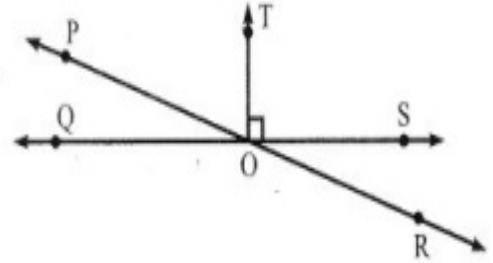
<p><b>Q10.</b></p>	<p>Find the measure of <math>x</math>, <math>y</math> and <math>z</math> given in the figure.</p>
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**Q11.**

In the following figure name the following pairs of angles:

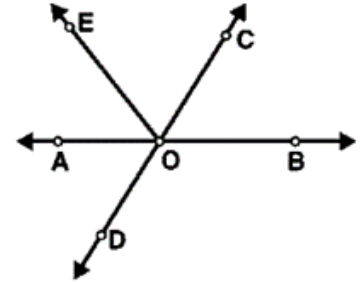
- (a) Acute vertically opposite angles.
- (b) Adjacent complement angles.
- (c) Linear pair



**Q12.**

In the given figure, identify:

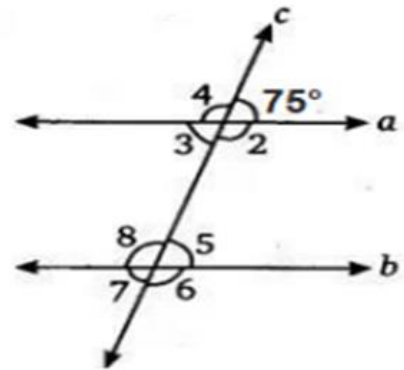
- (i) Two pairs of adjacent angles.
- (ii) A linear pair.
- (iii) A pair of vertically opposite angles.



**LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)**

**Q.13**

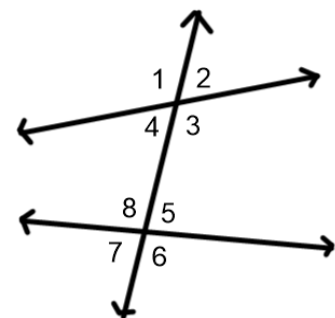
In the adjoining figure, find the unknown angles if a is parallel to b.



**Q14.**

Fill in the blanks:

- i)  $\angle 4$  and \_\_\_\_\_ are alternate interior angles.
- ii)  $\angle 4$  and \_\_\_\_\_ are interior angles on the same side of the transversal.
- iii)  $\angle 4$  and \_\_\_\_\_ are corresponding angles.
- iv)  $\angle 4$  and \_\_\_\_\_ vertically opposite angles.



**Q15.** In the given fig. state whether  $l \parallel m$ . Give reasons.

a)

b)

ANSWERS					
<b>Q1.</b>	a) $90^\circ$ b) $45^\circ$	<b>Q2.</b>	$33^\circ, 123^\circ$	<b>Q3.</b>	$40^\circ, 50^\circ$
<b>Q4.</b>	$x = 150^\circ, y = 150^\circ$	<b>Q5.</b>	$62^\circ, 118^\circ$	<b>Q6.</b>	i) Transversal ii) $45^\circ$
<b>Q7.</b>	18	<b>Q8.</b>	i) corresponding angles ii) Alternate interior angles iii) interior angles on the same side of the transversal	<b>Q9.</b>	$a = 45^\circ$ $b = 80^\circ$ $c = 55^\circ$
<b>Q10.</b>	$x = 65^\circ$ $y = 140^\circ$ $z = 40^\circ$	<b>Q11.</b>	a) $\angle POQ$ and $\angle ROS$ b) $\angle POQ$ and $\angle POT$ c) $\angle QOR$ and $\angle ROS$ or $\angle POQ$ and $\angle ROQ$	<b>Q12.</b>	i) $\angle DOA$ and $\angle AOE$ , $\angle EOC$ and $\angle BOC$ (any two) ii) $\angle BOC$ and $\angle BOD$ (any one) iii) $\angle AOD$ and $\angle BOC$
<b>Q13.</b>	$\angle 2 = 105^\circ, \angle 3 = 75^\circ$ $\angle 4 = 105^\circ, \angle 5 = 75^\circ$ $\angle 6 = 105^\circ, \angle 7 = 75^\circ$ $\angle 8 = 105^\circ$	<b>Q14.</b>	i) $\angle 5$ ii) $\angle 8$ iii) $\angle 7$ iv) $\angle 2$	<b>Q15.</b>	a) Yes b) No