

INDIAN SCHOOL AL WADI AL KABIR

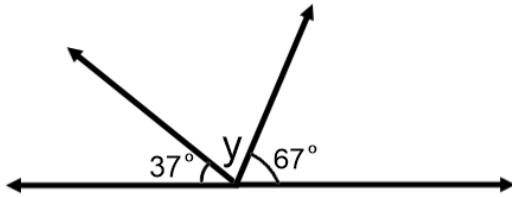
Class VII, Mathematics (2023-24)

Worksheet DTQ – LINES & ANGLES

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

Q1. Find the complement of each of the following angles:
a) 21° b) 88°

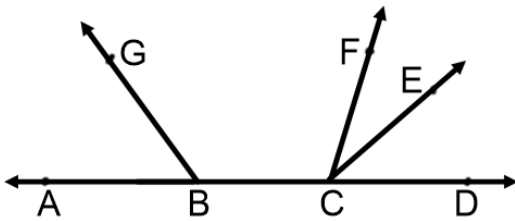
Q2. Find value of y in given figure.



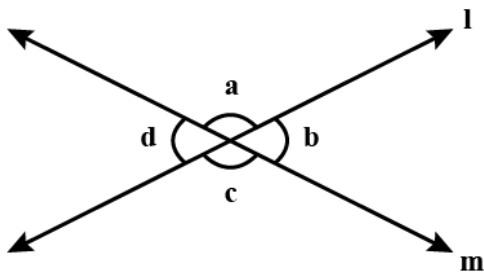
Q3. Find the supplement of each of the following angles:
a) two third of a right angle. b) 57° c) 132°

Q4. $\angle 1$ and $\angle 2$ are complementary angles. $\angle 2$ and $\angle 3$ are supplementary angles. If $\angle 1 = 45^\circ$, find the measure of $\angle 3$.

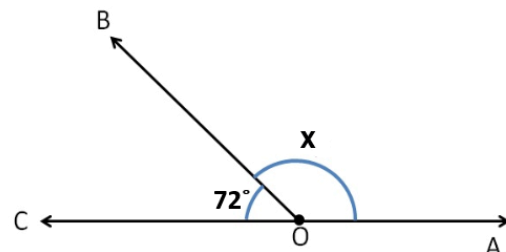
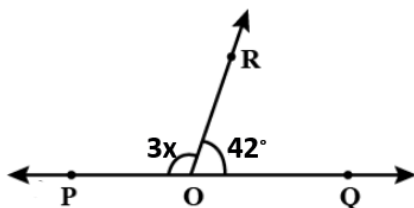
Q5. Name 2 pairs of adjacent angles from the given figure.



Q6. In the given figure if $c = 145^\circ$, find the value of other angles.

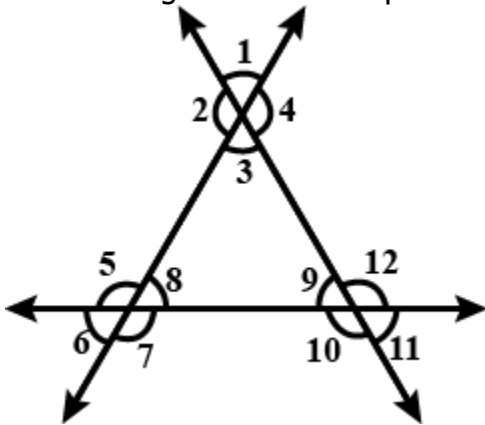


Q7. Find the value of 'x' in the given figure.

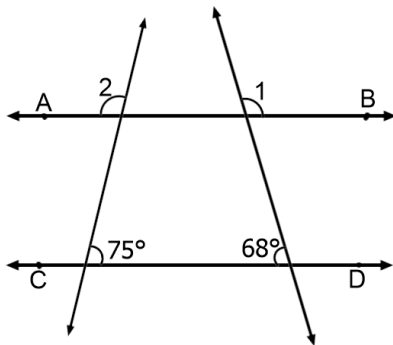


SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

Q8. From the figure name two pairs of linear pair and two pairs of vertically opposite angles.

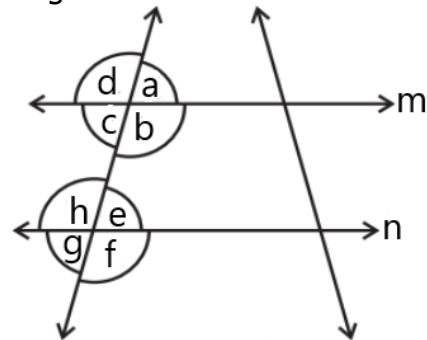


Q9. If AB parallel to CD, find $\angle 1$ and $\angle 2$ from the given figure:

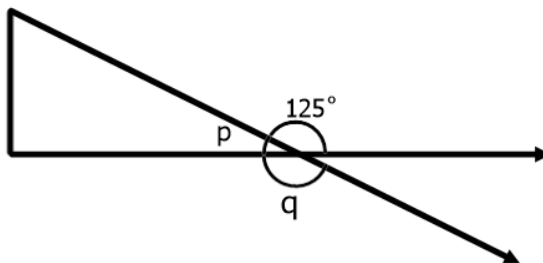


Q10. State the property that is used in each of the following statements?

- (i) If $m \parallel n$, then $b = f$.
- (ii) If $c + h = 180^\circ$, then $m \parallel n$.
- (iii) If $b = h$, then $m \parallel n$.



Q11. Find the unknown angles p and q from the given figure:



<p>Q12.</p>	<p>In the given figure, name the angles</p> <p>a) adjacent to $\angle AOE$</p> <p>b) vertically opposite to $\angle BOC$</p> <p>c) that forms linear pair with $\angle AOD$; $\angle BOE$</p>	
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LONG ANSWER TYPE- 4 QUESTIONS. (4 Marks each)

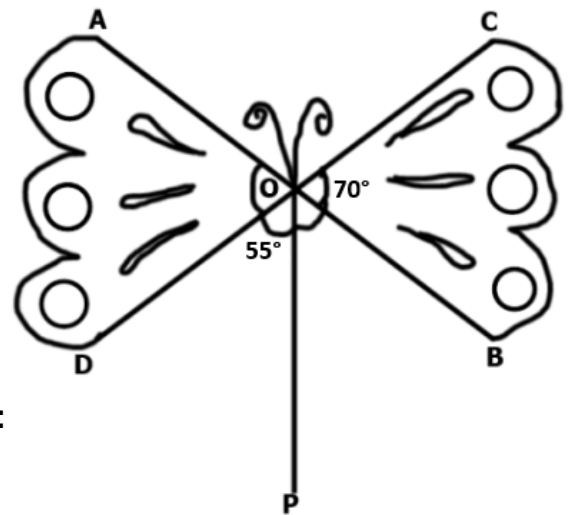
<p>Q.13</p>	<p>The legs of a stool make an angle of 40° with the floor, as shown in the figure.</p> <p>Find the value of x and y. (CBQ)</p>	
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<p>Q.14</p>	<p>Lines $m \parallel n$ and t is the transversal. Find the value of angle x in each figure.</p>		
<p align="center">(i)</p>	<p align="center">(ii)</p>	<p align="center">(iii)</p>	

<p>Q.15</p>	<p>Find missing angles x, y, z and s from the given figure; if the lines $m \parallel n$ and $p \parallel q$. (CBQ)</p>
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Q.16

Miya was making a toy butterfly with sticks for her younger sister. She arranged the sticks as shown in figure. AB and CD are two sticks intersecting at O and a third stick OP is also joined to hold the toy butterfly. From the figure $\angle BOC = 70^\circ$ and $\angle DOP = 55^\circ$. Based on the above information answer the following questions:



- i) What is the value of $\angle AOD$.
- ii) The angles $\angle AOC$ and $\angle BOD$ are _____ angles.
- iii) What is the value of $\angle POB$?

(CBQ)**ANSWERS**

Q1.	a) 69° , b) 2°	Q2.	$Y = 76^\circ$	Q3.	$120^\circ, 123^\circ, 48^\circ$
Q4.	$\angle 3 = 135^\circ$	Q5.	$(\angle ABG, \angle GBC),$ $(\angle FCE, \angle ECD)$	Q6.	$a = 145^\circ, b = 35^\circ, d = 35^\circ$
Q7.	$46^\circ, 108^\circ$	Q8.	<i>Linear pairs:</i> $(\angle 1, \angle 2), (\angle 3, \angle 4);$ <i>Vertically opposite angles:</i> $(\angle 2, \angle 4), (\angle 9, \angle 11),$ $(\angle 6, \angle 8), (\angle 5, \angle 7)$	Q9.	$\angle 1 = 112^\circ, \angle 2 = 105^\circ$
Q10.	i) Corresponding angle property	Q10.	ii) Interior angles on the same side of the transversal are supplementary	Q10.	iii) Alternate interior angle property
Q11.	$q = 125^\circ, p = 55^\circ$	Q12.	a) $\angle EOB$ b) $\angle AOD$ $(\angle AOD, \angle AOC)$ & $(\angle BOE, \angle EOA)$	Q13.	$x = 40^\circ, y = 140^\circ$
Q14.	i) 46° , ii) 48° , iii) 130°	Q15.	$x = 65^\circ, s = 65^\circ$ $y = 180 - 65 = 115^\circ$ $z = 115^\circ$	Q16.	i) 70° ii) Vertically opposite angles iii) 55°