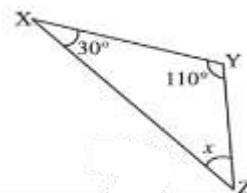


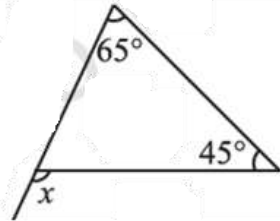
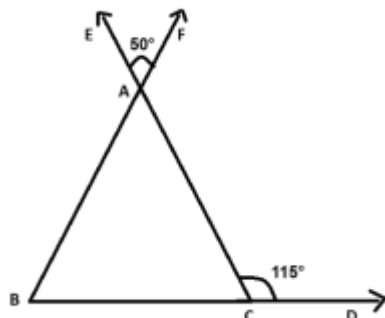


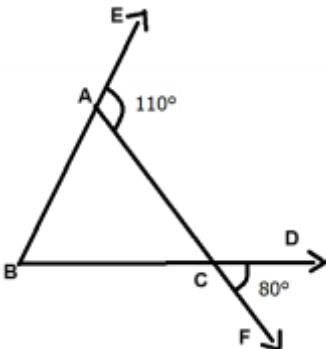
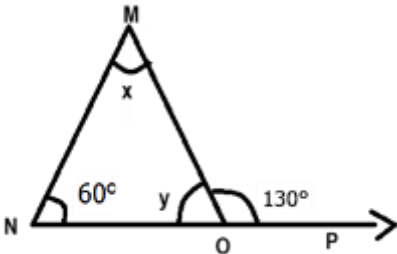
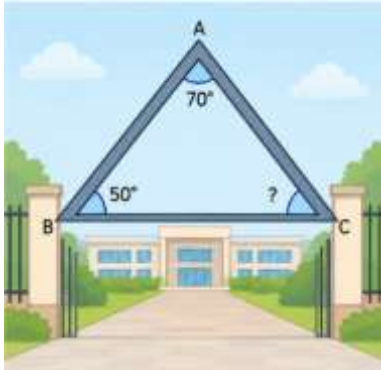
INDIAN SCHOOL AL WADI AL KABIR
Class VII, Mathematics
WORKSHEET (2026 – 27)
A TALE OF THREE INTERSECTING LINES

Multiple Choice Questions

Q.1	If the sum of two angles in a triangle is 120° , then the third angle is:							
	A	55°	B	40°	C	180°	D	60°
Q.2	In a triangle, the sum of the lengths of any two sides must be the length of third side.							
	A	greater than	B	smaller than	C	equal or smaller than	D	equal or greater than
Q.3	A triangle can be constructed by taking two of its angles as:							
	A	$150^\circ, 30^\circ$	B	$100^\circ, 30^\circ$	C	$170^\circ, 50^\circ$	D	$100^\circ, 130^\circ$
Q.4	Find the value of 'x'.							
	A	50°	B	100°	C	40°	D	75°
Q.5	Which of the following can be the lengths of sides of a triangle?							
	A	3cm, 4cm, 7cm	B	5cm, 4cm, 10cm	C	2cm, 5cm, 7cm	D	3cm, 4cm, 5cm
Q.6	In a right-angled triangle, if one of the acute angle measures is 25° then the measure of the other acute angle is _____.							
	A	25°	B	55°	C	65°	D	130°
Q.7	One of the angles of a triangle is 130° , and the other two angles are equal. What is the measure of each of these equal angles?							
	A	25°	B	40°	C	75°	D	180°



Q.8	Find the value of 'x'.							
								
	A	80°	B	110°	C	120°	D	140°
Q.9	If the exterior angle of a triangle is 140° and its interior opposite angles are equal, then the measure of each interior opposite angle is							
	A	40°	B	65°	C	20°	D	70°
Q.10	In a triangle, the measure of two angles is 85° and 45°. Then the measure of third angle will be:							
	A	50°	B	78°	C	130°	D	80°
	LONG ANSWER QUESTIONS:							
Q.11	Two sides of a triangle are 5 cm and 8 cm. What can be the length of its third side to make the triangle possible?							
Q.12	Construct triangles for the following measurements:							
	(a) AB =5 cm, $\angle A= 30^\circ$, AC = 8 cm				(d) EF = 8cm ,EG= 10 cm, FG = 12 cm			
	(b) $\angle P = 55^\circ$, PQ = 5 cm, $\angle Q = 60^\circ$				(e) XY = 6cm, YZ = 9 cm XZ = 8 cm			
	(c) $\angle M = 30^\circ$, MN = 7 cm $\angle N = 30^\circ$				(f) RS = 7.5 cm, $\angle R = 40^\circ$, RT = 5.5 cm			
Q.13	Two angles of a triangle are equal, and the third angle is 60° more than each of them. Find the three angles.							
Q.14	Riya tries to construct a triangle with two angles measuring 85° and 105°, and the side between these two angles measuring 4 cm. Can she construct the triangle? Give a reason for your answer.							
Q.15	A triangular signboard ABC has sides BC, CA and AB produced to D, E and F respectively. If $\angle ACD = 115^\circ$ and $\angle EAF = 50^\circ$. Find the angles of $\triangle ABC$.							
								

Q.16	A designer wants to make triangular frames using different sets of rods. Check which sets can form a triangle. (i) 8 cm, 10 cm, 12 cm (ii) 6 cm, 7 cm, 13 cm (iii) 6 cm, 9 cm, 14 cm Use the triangle inequality property to justify your answers.
Q.17	Ayush is creating a triangular decoration for a school event. Two of its angles are measuring 60° each. a. Calculate the third angle. b. Are all the angles equal? c. Identify the type of triangle.
Q.18	Find the value of $\angle ABC$. 
Q.19	Find the value of x and y. 
Q.20	Case Study An architect is designing a triangular entrance gate for a new school building. The gate has three corners, forming a triangle. To ensure that the gate is designed correctly, the architect measures two of its interior angles as 70° and 50°. Using the properties of triangles, answer the following: - Find the measure of the third interior angle of the gate. - Classify the triangle according to its angles. - The side of the gate at the 70° vertex is extended to form an exterior angle. Find the measure of this exterior angle. - Name the property used to find the third interior angle. 

ANSWERS									
1.	D	2.	A	3.	B	4.	C	5.	D
6.	C	7.	A	8.	B	9.	D	10.	A
11.	Greater than 3 cm and less than 13 cm.	12.	Construction		13.	40°, 40°, 100°		14.	The triangle cannot be constructed because the sum of two angles exceeds 180°.
15.	$\angle ACB = 65^\circ$ $\angle BAC = 50^\circ$ $\angle ABC = 65^\circ$	16.	(i) and (iii)		17.	a. 60° b. yes c. Equilateral triangle	18.	30°	
19.	x = 70°; y = 50°				20.	1. 60° 2. Acute angled triangle 3. 110° 4. Angle sum property of a triangle.			