

MATHEMATICS

PRACTICAL GEOMETRY

- 1 In $\triangle RST$, $R = 5$ cm, and $\angle SRT = 45^\circ$ and $\angle RST = 45^\circ$. Which criterion can be used to construct $\triangle RST$?

(A) A.S.A. criterion (B) S.A.S. criterion
(C) S.S.S. criterion (D) R.H.S. criterion

Ans: (A) A.S.A. criterion

- 2 Identify the criterion of construction of the equilateral triangle LMN given $LM = 6$ cm.

(A) S.A.S. criterion (B) R.H.S. criterion
(C) A.S.A. criterion (D) S.S.S. criterion

Ans: (D) S.S.S. criterion

- 3 The idea of equal alternate angles is used to construct which of the following?

(A) A line parallel to a given line (B) A triangle
(C) A square (D) Two triangles

Ans: (A) A line parallel to a given line.

- 4 A Given $AB = 3$ cm, $AC = 5$ cm, and $\angle B = 30^\circ$, $\triangle ABC$ cannot be uniquely constructed, with AC as base, why?

(A) Two sides and included angle are given. (B) The other two angles are not given.
(C) The vertex B cannot be uniquely located. (D) The vertex A coincides with the vertex C.

Ans: (C) The vertex B cannot be uniquely located.

- 5 A line and a point X not on it are given. Which of the following is used to draw a line parallel to p through X?

(A) Equal corresponding angles. (B) Congruent triangles.
(C) Angle sum property of triangles. (D) Pythagoras' theorem.

Ans: (A) Equal corresponding angles.

sol:

Corresponding angles of parallel lines are equal.

- 6 $\triangle PQR$ is such that $\angle P = \angle Q = \angle R = 60^\circ$ which of the following is true?

(A) $\triangle PQR$ is equilateral. (B) $\triangle PQR$ is acute angled.
(C) Both [a] and [b] (D) Neither [a] nor [b]

Ans: (C) Both [a] and [b]

sol:

In $\triangle PQR$ since all the angles are acute, it is acute angled. Also since all the angles are equal, it is equilateral.

- 7 Which vertex of $\triangle ABC$ is right angled if $\overline{AB} = 8$ cm, $\overline{AC} = 6$ cm, and $\overline{BC} = 10$ cm,?

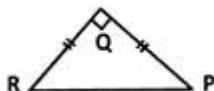
(A) $\angle C$ (B) $\angle A$ (C) $\angle B$ (D) A or C

Ans: (B) $\angle A$

Sol :

From the given measurements, \overline{BC} is the hypotenuse. The angle opposite to \overline{BC} is $\angle A$ which is a right angle.

- 8 An isosceles triangle is constructed as shown in the figure.



Which of the given statements is incorrect?

- (A) \overline{PR} is the hypotenuse of $\triangle PQR$.
(B) $\triangle PQR$ is an equilateral triangle.
(C) $\triangle PQR$ is a right angled triangle.
(D) If right angled $\triangle PQR$ has its equal angles measuring 45° each

Ans: (B) $\triangle PQR$ is an equilateral triangle.

- 9 $\triangle PQR$ is constructed with all its angles measuring 60° each. Which of the following is correct?

- (A) $\triangle PQR$ is an equilateral triangle.
(B) $\triangle PQR$ is isosceles triangle.
(C) $\triangle PQR$ is a scalene triangle.
(D) $\triangle PQR$ is a right angled triangle.

Ans: (A) $\triangle PQR$ is an equilateral triangle.

- 10 How many perpendicular lines can be drawn to a line from a point not on it?

- (A) 1 (B) 2 (C) 0 (D) Infinite

Ans: (A) 1

- 11 Identify the false statement.

- (A) A triangle with three equal sides is called an equilateral triangle.
(B) A triangle with a right angle is called a right angled triangle.
(C) A triangle with two equal sides is called a scalene triangle.
(D) A right angled triangle has two acute angles and a right angle.

Ans: (C) A triangle with two equal sides is called a scalene triangle.

- 12 $\triangle PQR$ is constructed such that $PQ = 5$ cm, $PR = 5$ cm and $\angle RPQ = 50^\circ$ Identify the type of triangle constructed.

- (A) An isosceles triangle (B) An acute angled triangle
(C) An obtuse angled triangle (D) Both [a] and [b]

Ans: (D) Both [a] and [b]

- 13 Which of the following is NOT constructed using a ruler and a set square?

- (A) A perpendicular to a line from a point not on it.
(B) A perpendicular bisector of a line segment.
(C) A perpendicular to a line at a point on the line.
(D) A line parallel to a given line through a given point.

Ans: (B) A perpendicular bisector of a line segment.

- 14 Study the steps of construction given.

Step 1: Draw a ray OA.

Step 2: With O as centre and any convenient radius draw an arc MN to cut OA at M.

Step 3: With M as centre and the same radius draw an arc to cut MN at P.

Step 4: With P as centre and the same radius, draw an arc to cut MN at Q.

Step 5: Draw OQ and produce it to D. An angle AOD is constructed.

What is the measure of $\angle AOD$?

(A) 60°

(B) 30°

(C) 120°

(D) 45°

Ans: (C) 120°

- 15 In $\triangle XYZ$, x, y and z denote the three sides. Which of the following is incorrect?

(A) $x - y > z$

(B) $x + z > y$

(C) $x - y < z$

(D) $x + y > z$

Ans: (A) $x - y > z$

- 16 In which of the following cases can a triangle be constructed?

(A) Measures of three sides are given.

(B) Measures of two sides and an included angle are given.

(C) Measures of two angles and the side between them are given.

(D) All the above.

Ans: (D) All the above.

- 17 Based on the sides of a triangle, which of the following is a classification of triangles?

(A) A right angled triangle

(B) An acute angled triangle

(C) An obtuse angled triangle

(D) An isosceles triangle

Ans: (D) An isosceles triangle

- 18 Which of the following is used to draw a line parallel to a given line?

(A) A protractor

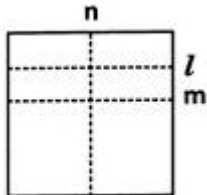
(B) A set square

(C) A ruler

(D) A ruler and compasses

Ans: (D) A ruler and compasses

- 19 Direction: David folds a sheet of paper. The dotted lines as shown in the figure are the creases formed, which are named as l, m and n.



What can you say about lines l and n?

(A) $l \parallel n$

(B) $l \perp n$

(C) l is the same line as n

(D) Neither [a] nor [b]

Ans: (B) $l \perp n$

sol:

A 90° angle is formed at the intersection of l and n. So $l \perp n$.

20 A Choose the correct option in which a triangle CANNOT be constructed with the given lengths of sides.

(A) 3 cm, 4 cm, 5 cm

(B) 7 cm, 6 cm, 5 cm

(C) 10 cm, 7 cm, 2 cm

(D) 12 cm, 8 cm, 6 cm

Ans: (C) 10 cm, 7 cm, 2 cm

21 Identify the true statement.

(A) A triangle with 3 equal sides is isosceles.

(B) A triangle with a 110° angle is right angled.

(C) A triangle with 3 acute angles is acute angled.

(D) A triangle with 2 equal sides is equilateral.

Ans: (C) A triangle with 3 acute angles is acute angled.

22 Which of the following statements is incorrect?

(A) The sum of angles in a triangle is 2 right angles.

(B) The exterior angle of a triangle is equal to the interior angle of the triangle.

(C) The hypotenuse is the longest side of a right angled triangle.

(D) All the above.

Ans : (B) The exterior angle of a triangle is equal to the interior angle of the triangle.

23 A triangular sign board is isosceles. If the unequal side is 7 cm and one of the equal sides is 6 cm, what is the measure of the third side?

(A) 5 cm

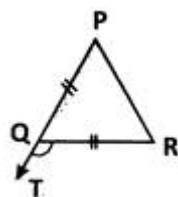
(B) 6 cm

(C) 7 cm

(D) Either [a] or [c]

Ans: (B) 6 cm

24 In the given figure, find the measure of $\angle ROT$, if $PQ = QR$ and $\angle QPR = 60^\circ$.



(A) 60°

(B) 140°

(C) 120°

(D) 100°

Ans: (C) 120°

sol:

ΔPQR is isosceles since $PQ = QR$.

$\therefore \angle QPR = \angle QRP = 60^\circ$ $\angle RQT$ is the exterior angle of ΔPQR which is equal to the sum of interior opposite angles $\angle P$ and $\angle R$.

Hence, $\angle RQT = 60^\circ + 60^\circ = 120^\circ$.

24 Which among the following is used to construct a triangle?

(A) The lengths of the three sides.

(B) The perimeter of the triangle.

(C) The measures of three angles.

(D) The names of three vertices.

Ans: (A) The lengths of the three sides.

sol:

S.S.S. criterion can be used indirectly to construct a triangle given the lengths of its three sides.

25 How many lines can draw from a given point.

- (A) 1 (B) 2 (C) Infinite (D) None of these

Ans: (C) Infinite

26 How many parallel lines can draw from a outside point of a given line ?

- (A) 1 (B) 2 (C) Infinite (D) None of these

Ans: (A) 1

27 Which among the following is used to construct a triangle?

- (A) The lengths of the three sides. (B) The perimeter of the triangle.
(C) The measures of three angles. (D) The names of three vertices.

Ans: (A) The lengths of the three sides.

30 How many parallel lines can be drawn passing through a point, not on the given line?

- (A) 2 (B) 1 (C) 3 (D) 0

Ans: (B) 1

31 In which of the following cases is the construction of a triangle not possible?

- (A) Measures of 3 sides are given.
(B) Measures of 2 sides and an included angle are given.
(C) Measures of 2 angles and a side are given.
(D) Measures of 3 angles are given.

Ans: (D) Measures of 3 angles are given.

32 identify the true statement.

- (A) A triangle with 3 equal sides is isosceles.
(B) A triangle with a 110o angle is right angled.
(C) A triangle with 3 acute angles is acute angled.
(D) A triangle with 2 equal sides is equilateral.

Ans: (C) A triangle with 3 acute angles is acute angled.

33 A Choose the correct option in which a triangle CANNOT be constructed with the given lengths of sides.

- (A) 3 cm, 4 cm, 5 cm (B) 7 cm, 6 cm, 5 cm
(C) 10 cm, 7 cm, 2 cm (D) 12 cm, 8 cm, 6 cm

Ans: (C) 10 cm, 7 cm, 2 cm

34 Which is the longest side in the triangle ABC right angled at B?

- (A) BC (B) AC (C) AB (D) None of these

Ans: (B) AC

35 ΔPQR is a triangle right-angled at P. If $PQ = 3$ cm and $PR = 4$ cm, find QR.

- (A) 3 cm (B) 7 cm (C) 5 cm (D) 8 cm

Ans: (C) 5 cm

36 Which is the longest side in the triangle PQR right angled at P?

(A) PR (B) PQ (C) QR (D) None of these
Ans: (C) QR

37 The sum of the lengths of any two sides of a triangle is _____ the third side of the triangle.

(A) less than (B) doubled (C) greater than (D) half
Ans: (C) greater than

38 A/an _____ connect a vertex of a triangle to the mid-point of the opposite side.
(A) altitude (B) vertex (C) median (D) None of these

Ans: (C) median

39 In the Pythagoras property, the triangle must be _____.

(A) acute-angled (B) obtuse-angled (C) right-angled (D) None of these
Ans: (C) right-angled

40 Which is the longest side of a right triangle?

(A) Hypotenuse (B) Base (C) Perpendicular (D) None of these
Ans: (A) Hypotenuse

41 A triangle in which all three sides are of equal lengths is called _____.

(A) Equilateral (B) Scalene (C) Isosceles (D) None of these
Ans: (A) Equilateral

42 A triangle can be drawn if the hypotenuse and a _____ in the case of a right-angled triangle.

(A) base (B) hypotenuse (C) leg (D) None of these
Ans: (C) leg

43 Sum of the lengths of any two sides of a triangle is greater than the length of the _____.

(A) first side (B) second side (C) third side (D) none of these
Ans: (C) third side

44 A triangle can be drawn if _____ angles and one side given.

(A) 2 (B) 3 (C) 4 (D) None of these
Ans: (A) 2

45 The exterior angle of a triangle is _____ in measure to the sum of interior opposite angles.

(A) equal (B) unequal (C) different (D) None of these
Ans: (A) equal

46 $\triangle ABC$ is right-angled at C. If AC = 5 cm and BC = 12 cm find the length of AB.

(A) 17 cm (B) 7 cm (C) 13 cm (D) None of these
Ans: (C) 13 cm

- 47 Identify the true statement.
- A) A triangle with 3 equal sides is isosceles.
 - B) A triangle with a 95° angle can be right angled.
 - C) A triangle with 3 acute angles is acute angled.
 - D) A triangle with 2 equal sides is equilateral.

Ans : C

- 48 In which of the following cases is the construction of a triangle not possible?
- A) Measures of 3 sides are given.
 - B) Measures of 2 sides and an included angle are given.
 - C) Measures of 2 angles and a side are given.
 - D) Measures of 3 angles are given.

Ans : D

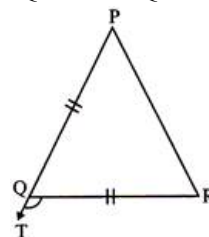
- 49 Choose the correct option in which a triangle CANNOT be constructed with the given lengths of sides.
- A) 3 cm, 13 cm, 15 cm
 - B) 6 cm, 6 cm, 6 cm
 - C) 9 cm, 6 cm, 2 cm
 - D) 13 cm, 6 cm, 8 cm

Ans : C

- 50 Which among the following is sufficient to construct a triangle?
- A) The lengths of the three sides
 - B) The perimeter of the triangle
 - C) The measures of three angles
 - D) The names of three vertices.

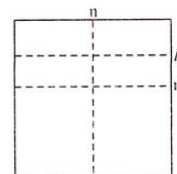
Ans : A

- 51 In the given figure, find the measure of $\angle RQT$ (exterior \angle), if $PQ=QR$ and $\angle QPR=50^\circ$
- A) 80°
 - B) 135°
 - C) 100°
 - D) 110°



Ans : C

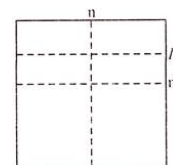
- 52 Direction: Meera folds a sheet of paper. The dotted lines as shown in the figure are the creases formed, which are named as 1, m and n. Which of the following is true?



- A) $l \parallel m$
- B) $l \parallel n$
- C) $n \parallel m$
- D) Either (B) or (C)

Ans : A

- 53 Direction: Meera folds a sheet of paper. The dotted lines as shown in the figure are the creases formed, which are named as 1, m and n. What can you say about lines 1 and n?



- A) $1/m$ B) $1 \perp n$ C) l is the same line as n D) Neither (A) nor (B)

Ans : B

- 54 A triangular sign board on highway from Agartala to Dibrugarh is isosceles. If the unequal side is 8 cm and one of the equal sides is 9 cm, what is the measure of the third side?

- A) 9 cm B) 8 cm C) $17/2$ cm D) Either (A) or (C)

Ans : A

- 55 Which of the following is used to draw a line parallel to a given line?

- A) A protractor B) A set square C) A ruler D) A ruler and compass

Ans : D

- 56 Which of the following statements is incorrect?

- A) The sum of angles in a triangle is 2 right angles.
 B) The exterior angle of a triangle is equal to the interior angle of the triangle.
 C) The hypotenuse is the longest side of a right angled triangle.
 D) All the above

Ans : B

- 57 How many parallel lines can be drawn passing through a point not on the given line?

- A) 2 B) 1 C) 3 D) 0

Ans : B

- 58 In which of the following cases can a triangle be constructed?

- A) Measures of three sides are given.
 B) Measures of two sides and an included angle are given.
 C) Measures of two angles and the side between them are given.
 D) All the above

Ans : D

- 59 Which type of triangle is in the classification based on angles only?

- A) An equilateral triangle B) A scalene triangle
 C) A right angled triangle D) An isosceles triangle

Ans : C

- 60 The measurements of $\triangle DEF$ are $EF=8.4$ cm, $\angle E=100^\circ$ and $\angle F=82^\circ$ Which of the following is correct?

- A) $\triangle DEF$ can be constructed. B) $\triangle DEF$ is an obtuse angled triangle.
 C) $\triangle DEF$ cannot be constructed D) $\triangle DEF$ is an acute angled triangle.

Ans : C

- 61 Based on the sides of a triangle, which of the following is a classification of triangles?

- A) A right angled triangle B) An acute angled triangle
 C) An obtuse angled triangle D) An isosceles triangle

Ans : D

62 Which of the following can be used to construct a 30° angle?

- A) Construct a 60° angle using compasses and bisect it.
- B) Construct a perpendicular bisector of a line segment.
- C) Construct the bisector of any angle.
- D) Construct an angle congruent to any given angle.

Ans : A

63 Rohan thinks he knows how to bisect angles and follows following steps to construct 45° angle.

Step 1: Construct an angle of 90° .

Step 2: Bisect the 90° angle.

Step 3: Bisect one of the angles obtained in step 2.

Which steps is not required to construct a 45° angle?

- A) Step 1
- B) Step 2
- C) Step 3
- D) Step 2 and 3

Ans : C

64 In $\triangle XYZ$, a, b, c denote the three sides, which of the following is incorrect?

- A) $a - b > c$
- B) $a + c > b$
- C) $a - b < c$
- D) $a + b > c$

Ans : A

65 Which of the following is NOT constructed using a ruler and a set square?

- A) A perpendicular to a line from a point not on it.
- B) A perpendicular bisector of a line segment.
- C) A perpendicular to a line at a point on the line.
- D) A line parallel to a given line through a given point.

Ans : B

66 Given $PQ = 6$ cm, $QR = 55$ cm and $RP = 55$ cm, what type of a triangle can be constructed?

- A) An acute angled triangle.
- B) An obtuse angled triangle
- C) An equilateral triangle
- D) A right angle triangle

Ans : A

67 Identify the false statement.

- A) A triangle with three equal sides is called an equilateral triangle.
- B) A triangle with a right angle is called a right-angled triangle.
- C) A triangle with two equal sides is called a scalene triangle.
- D) A right angled triangle has two acute angles and a right angle.

Ans : C

68 Identify the condition to be checked before constructing a triangle.

- A) Sum of the three angles is 180° .
- B) The sum of any two of the sides is greater than the third side.
- C) The difference of any two sides is lesser than the third side.
- D) All the above.

Ans : D

69 Identify the condition when a triangle can be constructed?

- A) One side and two acute angles are given.
- B) A side and an acute angle are given
- C) Two obtuse angles are given.
- D) All given sides are equal.

Ans : A

70 How many perpendicular lines can be drawn to a line from a point not on it?

- A) 1
- B) 2
- C) 0
- D) Infinite

Ans : A

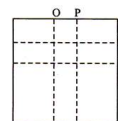
71 ΔPQR is constructed with all its angles measuring 60° each. Which, of the following is correct?

- A) ΔPQR is an equilateral triangle.
- B) ΔPQR is isosceles triangle.
- C) ΔPQR is a scalene triangle.
- D) ΔPQR is a right angled triangle.

Ans : A

72 Rajkumari folds a sheet of paper in the following way: Which of the following is false?

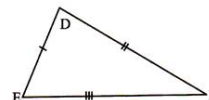
- A) Line $O \parallel$ line of P
- B) Line $m \perp$ line n
- C) With respect to lines O & P, line 'n' is a transversal
- D) With respect to lines m and n, line 'O' is transversal



Ans : B

73 A triangle is constructed as shown in the figure. Which of the following is not correct about ΔDEF ?

- A) ΔDEF has all its sides equal.
- B) ΔDEF is an acute angled triangle.
- C) ΔDEF is a scalene triangle.
- D) ΔDEF is not an equilateral triangle.



Ans : A

74 In ΔABC $\overline{AB} > \overline{BC} > \overline{CA}$ which of the following is the smallest angle?

- A) $\angle A$
- B) $\angle B$
- C) $\angle C$
- D) $\angle A = \angle B = \angle C$

Ans : B

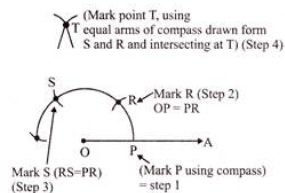
75 An isosceles triangle is constructed as shown in the figure. Which of the given statements is incorrect?

- A) \overline{PR} is the hypotenuse of ΔPQR .
- B) ΔPQR is an equilateral triangle.
- C) ΔPQR is a right-angled triangle.
- D) In right angled ΔPQR , its equal angles measure as $90^\circ, 45^\circ, 45^\circ$.

Ans : B

- 76 Identify the angle that gets constructed: after step 4 and by joining the points O and T.
 A) 30° B) 45° C) 60° D) 90°

Ans : D



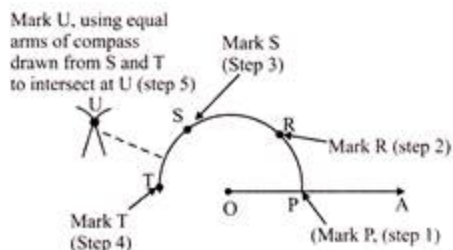
- 77 In the above figure, identify the angle constructed after step 3 and by joining the points O and S.
 A) 80° B) 75° C) 120° D) 135°

Ans : C

- 78 Identify the angle that is constructed after step 5 in the figure below and by joining the points O and U (where $\overline{PR} = \overline{RS} = \overline{ST}$)

- A) 40°
 B) 140°
 C) 135°
 D) 150°

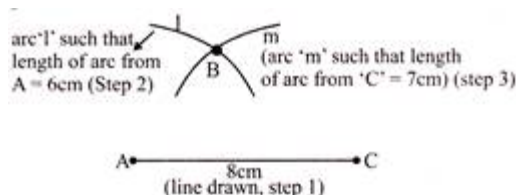
Ans : D



- 79 Given $AB=6$ cm $BC=7$ cm $CA=8$ cm, which of the following are right steps for constructing $\triangle ABC$.

- A) Step 1 is correct step 2 & 3 are wrong
 B) Step 2 & 3 are right step 1 is wrong
 C) All steps 1 to 3 are right
 D) None of the above.

Ans : C



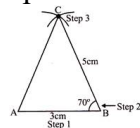
- 80 Which property has been used to construct the triangle in question 33?

- A) RHS property B) SSS property C) SAS property D) ASA property

Ans : B

- 81 Given $AB=3$ cm, $BC=5$ cm $\angle C=70^\circ$, are the following steps to construct the \triangle correctly shown?

- Step 1: Draw $AB=3$ cm
 Step 2: Draw angle $=70^\circ$ from B using protractor
 Step 3: Cut off length $= 5$ cm to get C



- A) Step 1 is correct B) Step 2 is correct
 C) All steps are correct D) Step 1 should be to draw $BC = 5$ cm

Ans : D

- 82 Which property is the correct one to construct triangle in question 35.
A) SSS Property B) SAS property C) RHS property D) AAA property

Ans : B

- 83 A line p and a point X not on it are given. Which of the following can be used to draw a line parallel to p through X ?
A) Equal corresponding angles B) Congruent triangles.
C) Heron's formula D) Pythagoras' theorem.

Ans : A

- 84 Given $AB=3$ cm, $AC=5.2$ cm, and $\angle B=35^\circ$. $\triangle ABC$ cannot be uniquely constructed, with AC as base, why?
A) Two sides and included angle are given.
B) The other two angles are not given.
C) The vertex B cannot be uniquely located.
D) The vertex A coincides with the vertex C .

Ans : C

- 85 A triangle $\triangle PQR$ with $\angle Q=90^\circ$, $QR=4$ cm and $PR=5$ cm is constructed. What would be the measure of PQ ?
A) 2 cm B) 6 cm C) 7 cm D) 3 cm

Ans : D

- 86 The idea of equal alternate angles is used to construct which of the following?
A) A line parallel to a given line B) A triangle C) A square D) Two triangles

Ans : A

- 87 In $\triangle ABC$, if $AB=7$ cm, $\angle A=40^\circ$ and $\angle B=70^\circ$, which criterion can be used to construct this triangle?
A) ASA B) SSS C) SAS D) RHS

Ans : A

- 88 Which one of the following is true for the given triangle?
A) $\angle 3=\angle 1+\angle 2$ B) $\angle 1=\angle 3+\angle 2$
C) $\angle 2=\angle 1+\angle 3$ D) Both (A) and (B)

Ans : A

89 The ___ criterion is used to construct a triangle when the lengths of the three sides are given.

A) SAS

B) SSS

C) RHS

D) ASA

Ans : B

90 A triangle can be constructed by taking its sides as

A) 1.8 cm, 2.6 cm, 4.4 cm

B) 2 cm, 3 cm, 4 cm

C) 2.4 cm, 2.4 cm, 6.4 cm

D) 3.2 cm, 2.3 cm, 5.5 cm

Ans : B

91 A triangle can be constructed by taking two of its angles as

A) 110° , 40°

B) 70° , 115°

C) 135° , 45°

D) 90° , 90°

Ans : A

92 Which of the following sets of triangles could be the lengths of the sides of a right-angled triangle?

A) 3 cm, 4 cm, 6 cm

B) 9 cm, 16 cm, 26 cm

C) 1.5 cm, 3.6 cm, 3.9 cm

D) 7 cm, 24 cm, 26 cm

Ans : C

93 In which of the following cases, a unique triangle can be drawn?

A) $AB=4$ cm, $BC=8$ cm and $CA=2$ cm

B) $BC=5.2$ cm, $\angle S=90^\circ$ and $\angle C=110^\circ$

C) $XY=5$ cm, $\angle X=45^\circ$ and $\angle Y=60^\circ$

D) An isosceles triangle with the length of each equal side 6.2 cm.

Ans : C

94 Which of the following statements is INCORRECT?

A) If length of any two sides of a triangle are 7 cm and 10 cm, then length of its third side lies between 3 cm and 17 cm.

B) It is possible to construct a unique triangle if all its three angles are given.

C) An angle of $7\frac{1}{2}^\circ$ can't be constructed using compasses and ruler.

D) None of these

Ans : C

- 95 Which of the following steps is INCORRECT while constructing $\triangle XYZ$ if it is given that $XY=6\text{cm}$, $\angle ZXY=30^\circ$ and $\angle XYZ=100^\circ$
 Step 1: Draw line XV of length 6 cm.
 Step 2: At X , draw a ray XP making an angle of 30° with XY .
 Step 3: At V , draw a ray YQ making an angle of 100° with YX .
 Step 4: The point of intersection of the two rays XY and YQ is Z .
 A) Step 1 B) Step 2 and Step 4 C) Step 3 D) Step 4

Ans : D

- 96 Which among the following is used to construct a triangle?
 A) The lengths of the three sides. B) The perimeter of the triangle.
 C) The measures of three angles. D) The names of three vertices.

Ans : A

- 97 In the given figure, find the measure of $\angle ROT$, if $PQ=QR$ and $\angle QPR=60^\circ$.
 A) 60° B) 140° C) 120° D) 100°

Ans : C

- 98 Arrange the given steps in CORRECT order, while constructing $\triangle PQR$ where $PM \perp QS$ and it is given that $QR=4.2\text{ cm}$, $\angle Q=120^\circ$ and $PQ=3.5\text{ cm}$.
 Step 1. Now, extend RQ to S and with P as centre and with a sufficient radius, draw an arc, cutting SO at A and B .
 Step 2. Along QX , set off $QP=3.5\text{ cm}$.
 Step 3. Draw a line segment $QR=4.2\text{ cm}$ and construct $\angle RQX=120^\circ$.
 Step 4. Joint PR .
 Step 5. Joint PC , meeting RQ produced at M . Then. $PM \perp QS$
 Step 6. With A as centre and radius more than half AB , draw an arc. Now with B as centre and with the same radius draw another arc, cutting the previous arc at C .
 A) $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 6$ B) $4 \rightarrow 1 \rightarrow 2 \rightarrow 3 \rightarrow 5 \rightarrow 6$
 C) $2 \rightarrow 4 \rightarrow 3 \rightarrow 1 \rightarrow 5 \rightarrow 6$ D) $3 \rightarrow 2 \rightarrow 4 \rightarrow 1 \rightarrow 6 \rightarrow 5$

Ans : D

- 99 State 'T' for true and 'F' for false.
 (1) In a triangle, the measure of exterior angle is equal to the sum of the measure of interior opposite angles.
 (2) The sum of the measures of the three angles of a triangle is 90° .
 (3) A perpendicular is always at 90° to a given line or surface.
 A) (1) (2) (3)
 T T F
 B) (1) (2) (3)
 T F F
 C) (1) (2) (3)
 T F T
 D) (1) (2) (3)
 F T F

Ans : B

- 100 Which of the following steps is INCORRECT while constructing $\triangle LMA$, right angled at M, given that $LN=5$ cm and $MN=3$ cm?
- Step 1. Draw MN of length 3 cm.
- Step 2. At M, draw $MX \perp MN$. (L should be somewhere on this perpendicular).
- Step 3. With N as centre, draw an arc of radius 5 cm. (L must be on this arc, since it is at a distance of 5 cm from N).
- Step 4. L has to be on the perpendicular line MX as well as on the arc drawn with centre N. Therefore, L is the meeting point of these two and $\triangle LMA$ is obtained.
- A) Only Step 4 B) Both Step 2 and Step 3
C) Only Step 2 D) None of these

Ans : D