MATHEMATICS

PRACTICAL GEOMETRY

 1
 In ΔRST, R = 5 cm, and ∠SRT = 45° and ∠RST = 45°. Which criterion can be used to construct ΔRST?

 (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
 (A) A.S.A. criterion

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

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
(D) Two triangles

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

A Given AB = 3 cm, AC = 5 cm,and∠B = 30°, ∆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 panda 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.(C) Angle sum property of triangles.

- (B) Congruent triangles.
- (D) Pythagoras' theorem.

Ans: (A) Equal corresponding angles.

sol:

Corresponding angles of parallel lines are equal.

6 Δ PQR is such that $\angle P = \angle Q = \angle R = 60^{\circ}$ which of the following is true? (A) Δ PQR is equilateral. (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.

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

Which of the given statements is incorrect?

(A) \overline{PR} is the hypotenuse of ΔPQR .

(C) \triangle POR is a right angled triangle.

(D) If right angled $\triangle PQR$ has its. equal angles measuring 45° each

(B) \triangle PQR is an equilateral triangle.

(D) $\triangle PQR$ is a right angled triangle.

(D) Both [a] and [b]

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

- 9 Δ PQR is constructed with all its angles measuring 60° each. Which of the following is correct? (B) \triangle PQR is isosceles triangle.
 - (A) \triangle PQR is an equilateral triangle.
 - (C) \triangle PQR is a scalene 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.

- \triangle PQR is constructed such that PQ = 5 cm, PR = 5 cm and \angle RPQ = 50° Identify the type 12 of triangle constructed. (B) An acute angled triangle
 - (A) An isosceles triangle
 - (C) An obtuse angled triangle

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

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

- (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.

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 ∠AOD?
(A) 60°
(B) 30°
(C) 120°
(D) 45°

15 In ΔXYZ, x, y and z denote the three sides. Which of the following is incorrect'?

(A) $x - y \ge z$ (B) $x + z \ge y$ (C) $x - y \le z$ (D) $x + y \ge z$ Ans: (A) $x - y \ge z$

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.

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 I and n?

 $\begin{array}{ccc} (A) \, l \, / / \, n & (B) \, l \, \perp \, n & (C) \, I \mbox{ is the same line as } n & (D) \, Neither \, [a] \mbox{ nor } [b] \\ Ans: \, (B) \, l \, \perp \, n & \end{array}$

sol:

A 90° angle is formed at the intersection of 1 and n. So $1 \perp n$.

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

- 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.
- 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

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



(B) 140° (C) 120° (D) 100°

(A) 60° Ans: (C) 120°

sol:

 Δ PQR is isosceles since PQ = QR.

 $\therefore \angle QPR = \angle QRP = 60^{\circ} \angle RQT$ is the exterior angle of $\triangle PQR$ which is equal to the sum of interior opposite angles $\angle P$ and $\angle R$. Hence, $\angle ROT = 60^{\circ} + 60^{\circ} = 120^{\circ}$.

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

(A) The lengths of the three sides.

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

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. (C) Infinite (A) 1 (B) 2 (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.

6 cm

(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? (D) 0 (A) 2 **(B)** 1 (C) 3

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 dentify the true statement.

- (A) A triangle with 3 equal sides is isosceles.
- (B) A triangle with a 1100 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? (B) AC (C) AB (D) None of these (A) BC Ans: (B) AC

35 Δ PQR 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 cmAns: (C) 5 cm

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

| Ans: (| (A) PR C) QR | (B) PQ | (C) QR | (D) None of these |
|--------|---|--|---|--|
| 37 | The sum of the lengtl the triangle. | ns of any two sides of a | a triangle is | the third side of |
| Ans: (| (A) less than C) greater than | (B) doubled | (C) greater than | (D) half |
| 38 | A/an(A) altitude | connect a vertex of a (B) vertex | triangle to the mid-poi (C) median | nt of the opposite side. (D) None of these |
| Ans: (| C) median | | | |
| 39 | In the Pythagoras pro (A) acute-angled | perty, the triangle mus (B) obtuse-angled | t be (C) right-angled | (D) None of these |
| Ans: (| C) right-angled | | | |
| 40 | Which is the longest (A) Hypotenuse | side of a right triangle' (B) Base | ? (C) Perpendicular | (D) None of these |
| Ans: (| A) Hypotenuse | (D) Duse | | |
| 41 | A triangle in which a | ll three sides are of equ | ual lengths is called | (D) Name of these |
| Ans: (| A) Equilateral | (B) Scalene | (C) isosceles | (D) None of these |
| 42 | A triangle can be dra | wn if the hypotenuse a | nd a in the case | of a right-angled |
| Ans: (| (A) base C) leg | (B) hypotenuse | (C) leg | (D) None of these |
| 13 | Sum of the lengths of | fany two sides of a tric | angle is greater than the | a length of the |
| Ans: (| (A) first side (C) third side | (B) second side | (C) third side | (D) none of these |
| 11 | A triangle can be dre | we if analog and | ana sida siyan | |
| 44 | (A) 2 | (B) 3 angles and | (C) 4 | (D) None of these |
| Ans: (| A) 2 | | | |
| 45 | he exterior angle of a | triangle is in 1 (B) unequal | neasure to the sum of i | interior opposite angles. (D) None of these |
| Ans: (| A) equal | (-) | (2) | |
| 46 | \triangle ABC is right-angled (A) 17 cm | d at C. If $AC = 5$ cm ar (B) 7 cm | nd BC = 12 cm find the (C) 13 cm | e length of AB. (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. B) 6 cm, 6 cm, 6 cm
 - A) 3 cm, 13 cm, 15 cm
 - C) 9 cm, 6 cm, 2 cm
- Ans : C
- 50 Which among the following is sufficient to construct a triangle?
 - A) The lengths of the three sides
 - C) The measures of three angles
- B) The perimeter of the triangle

D) 13 cm, 6 cm, 8 cm

D) The names of three vertices.

Ans : A

In the given figure, find the measure of $\angle RQT$ (exterior $\angle le$), if PQ=QR and $\angle QPR=50^{\circ}$ 51 B) 135⁰ A) 80⁰ C) 100⁰ 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) 1//m B) 1//n

 - C) n//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) 1 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 D) A ruler and compass B) A set square C) A ruler 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 How many parallel lines can be drawn passing through a point not on the given line? 57 B) 1 C) 3 D) 0 A) 2 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 The measurements of ΔDEF are EF=8.4 cm, $\angle E$ =100° and $\angle F$ =82° Which of the 60 following is correct? A) \triangle DEF can be constructed. B) \triangle DEF is an obtuse angled triangle. C) Δ le 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 Ans | Which of the following can be used A) Construct a 60° angle using com B) Construct a perpendicular bisect C) Construct the bisector of any ang D) Construct an angle congruent to : A | to construct a 30° angle? npasses and bisect it. tor of a line segment. gle. any given angle. | |
|-----------|--|---|--|
| 63 | Rohan thinks he knows how to bised 45° angle. Step 1: Construct an angle of 90°. Step 2: Bisect the 90° angle. Step 3: Bisect one of the angles obta Which steps is not required to const A) Step 1 B) Step 2 | ct angles and follows follo ained in step 2. ruct a 45°angle? C) Step 3 | owing steps to construct D) Step 2 and 3 |
| Ans | : C | | |
| 64 Ans | In \triangle XYZ,a, b, c denote the three side A) $a-b>c$ B) $a+c>b$: A | des, which of the followin C) a-b <c< td=""><td>ng is incorrect? D) a+b>c</td></c<> | ng is incorrect? D) a+b>c |
| 65 Ans | Which of the following is NOT constA) A perpendicular to a line from aB) A perpendicular bisector of a lineC) A perpendicular to a line at a poD) A line parallel to a given line thatB | structed using a ruler and point not on it. he segment. int on the line. rough a given point. | a set square? |
| 66 Ans | Given PQ=6 cm, QR=55 cm and RF A) An acute angled triangle. C) An equilateral triangle : A | P=55 cm,what type of a tr B) An obtuse an D) A right angle | iangle can be constructed? ngled triangle e triangle |
| 67 Ans | Identify the false statement. A) A triangle with three equal sides B) A triangle with a right angle is c C) A triangle with two equal sides is D) A right angled triangle has two a : C | s is called an equilateral to called a right-angled triang is called a scalene triangle acute angles and a right a | riangle. gle. e. ngle. |
| 68 Ans | Identify the condition to be checked A) Sum of the three angles is180 ⁰ . B) The sum of any two of the sides C) The difference of any two sides D) All the above. : D | before constructing a tria is greater than the third s in lesser than the third sic | angle. ide. ie. |

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

- Δ PQR is constructed with all its angles measuring 60° each. Which, of the following is 71 correct?
 - A) \triangle PQRis an equilateral triangle.
 - C) $\triangle PQR$ is a scalene triangle.
- B) $\triangle PQR$ is isosceles triangle.
- D) $\triangle PQR$ is a right angled triangle.

Ans : A

- Rajkumari folds a sheet of paper in the following way: Which of the following is false? 72 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) $\triangle DEF$ is an acute angled triangle.
 - C) ΔDEF is a scalene triangle.
 - D) $\triangle DEF$ is not an equilateral triangle.

Ans : A

In
$$\triangle ABC \ \overline{AB} > \overline{BC} > \overline{CA}$$
 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 $\cdot B$

Ans : B

- 75 An isosceles triangle is constructed as shown in the figure. Which of the given statements in incorrect?
 - A) *PR* is the hypotenuse of $\triangle PQR$.
 - B) $\triangle PQR$ is an equilateral triangle.
 - C) $\triangle PQR$ is a right-angled triangle.
 - D) In right angled $\triangle POR$, 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 (Mark point T, using requal arms of compass drawn form S and R and intersecting at T) (Step 4) Mark R (Step 2) OP = PR ō (Mark P using compass) Mark S (RS=PR) (Step 3) step ! 77 In the above figure, identify the angle constructed after step 3 and by joining the points O and S. A) 80⁰C B) 75⁰ C) 120° D) 135⁰ 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 PR = RS = STMark U, using equal A) 40⁰ arms of compass Mark S B) 140° drawn from S and T (Step 3) to intersect at U (step 5) C) 135⁰ D) 150° Mark R (step 2) Ans : D Ā Ô Mark T (Mark P. (step 1) (Step 4) 79 Given AB=6 cm BC=7cm CA=8 cm, which of are the following are right steps for constructing $\triangle ABC$. A) Step 1 is correct step 2 & 3 are wrong arc'l' such that, B) Step 2 & 3 are right step 1 is wrong (are 'm' such that length length of arc from C) All steps 1 to 3 are right of arc from 'C' = 7cm) (step 3) A = 6cm (Step 2) D) None of the above. Ans: C •C 8cm (line drawn, step 1) 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=70⁰, are the following steps to construct the \triangle lecorrectly 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 CStep 2 A) Step 1 is correct B) Step 2 is correct D) Step 1 should be to draw BC = 5 cmC) All steps are correct Ans : D

| 82 | Which property is the | correct one to \mathbf{D} SAS means | construct | triangle in question | 35. |
|-------------|--|---------------------------------------|--|---|--------------------------------|
| Ans : | B B | b) SAS prope | erty (| .) KHS property | D) AAA property |
| 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? | | | | |
| | C) Heron's formula | ing angles | D) Pvth | agoras' theorem. | |
| Ans : | Á | |) 5 | 6 | |
| 84 Ans : | Given AB=3 cm, AC=5.2 cm,and∠B=35⁰. ∠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. | | | | |
| 1 115 . | C | | | | |
| 85 | A triangle \triangle PQR with the measure of PQ? | $\Delta Q = 90^{\circ}, QR =$ | =4 cm and | PR = 5 cm is construct | D) 3 cm |
| Ans : | D D | B) 0 cm | , | <i>c)</i> / cm | D) 5 cm |
| 86 | The idea of equal alte A) A line parallel to a | rnate angles in a given line | used to c B) A tri | onstruct which of the angle C) A square | following? D) Two triangles |
| Ans : | A | | | | |
| 87 | In \triangle ABC, if AB=7 cm triangle? | $A = 40^{\circ} and Z$ | ∠B=70 ⁰ ,w | which criterion can be | used to construct this |
| Ans : | A) ASA A | B) SSS | (| C) SAS | D) RHS |
| 88 | Which one of the follo A) $\angle 3 = \angle 1 + \angle 2$ C) $\angle 2 = \angle 1 + \angle 3$ | owing is true fo B) ∠1 D) Bo | or the giv = $\angle 3 + \angle 2$ th (A) an | en triangle? d (B) | |
| Ans : | A | | | | |
| 89 | The criterion is use when the lengths of t | ed to construct he three sides a | a triangle re given. | , | |

| | A) SAS | B) SSS | C) RHS | D) ASA | |
|--------|---|---|---|-------------------------------|--|
| Ans : | В | | | | |
| 90 | A triangle can be con A) 1.8 cm, 2.6 cm, 4 C) 2.4 cm, 2.4 cm, 6 | structed by tal .4 cm .4 cm | king its sides as B) 2 cm, 3 cm, 4 cm D) 3.2 cm, 2.3 cm, 5.5 cm | m | |
| Alls . | D | | | | |
| 91 | A triangle can be con A) 110° , 40° | structed by tal B) 70° ,115 [°] | king two of its angles as C) 135 ⁰ ,45 ⁰ | D) $90^{0}, 90^{0}$ | |
| Alls . | A | | | | |
| 92 | Which of the followin triangle? | ng sets of trian | ngles could be the lengths of | f the sides of a right-angled | |
| | A) 3 cm, 4 cm, 6 cm | | B) 9 cm, 16 cm, 2 | 26 cm | |
| Ans : | C) 1.5 cm, 3.6 cm, 3 C | .9 cm | D) 7 cm, 24 cm, 1 | 26 cm | |
| 93 | In which of the following cases, a unique triangle can be drawn? A) AB=4 cm, BC=8 cmand CA=2 cm B) BC=5.2 cm, ∠S=90⁰ and ∠C=110⁰ C) XY=5 cm, ∠X=45⁰ and ∠Y=60⁰ D) An isosceles triangle with the length of each equal side 6.2 cm | | | | |
| Ans : | C | 0 | | | |
| | | | | | |
| 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 $7\frac{l^{\circ}}{2}$ | can't be constr | ructed using compasses and | ruler. | |
| Ans : | D) None of these | | | | |

- 95 Which of the following steps is INCORRECT while constructing $\Delta XYZif$ it is given that $XY=6cm, \angle ZX_y=30^0$ and $\angle XYZ=100^0$ Step 1: Draw line XV of length 6 cm. Step 2: At X, draw a ray XP making an angle of 30owith XY. Step 3: At V, draw a ray YQ making an angle of 100o 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
- Arrange the given steps in CORRECT order, while constructing ΔPQR where PM $\perp QS$ and it is given that QR=4.2 cm, $\angle Q=120^{\circ}$ and PQ=3.5 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 8.

- Step 2. Along QX, set off QP=3.5 cm.
- Step 3. Draw a line segment QR=4.2 cmand construct $\angle RQX=120^{\circ}$.
- Step 4. Joint PR.
- Step 5. Joint PC, meeting RQ product at
- M. Then. PM⊥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 is90o.

- (3) A perpendicular is always at 900 to a given line or surface.
- A) (1) (2)(3) Т Т F B) (1)(2)(3) Т F F C) (1)(2)(3) Т F Т D) (1)(2)(3) F Т F

Ans : B

- 100 Which of the following steps is INCORRECT while constructing Δ LMA,right angled at M, given that LN=5 cmandMN=3 cm?
 - Step 1. Draw MN of length 3 cm.
 - Step 2. At M, draw MX1MN. (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 ALMA/ is obtained.

A) Only Step 4 B) Both Step 2 and Step 3

C) Only Step 2 Ans : D