



Daffodil International School (EV)

Half Yearly-2021

Class- VII

Subject- General Mathematics

Module No:

Chapter- 07: Constructions.

Teacher's Name: Kazi Md Karim Hossain

1. $a = 5$ cm, $S = 7.5$ cm, $p = 11.5$ cm, $\angle x = 60^\circ$, $\angle y = 50^\circ$ & $\angle z = 30^\circ$
 - a. The length of the hypotenuse and a side of a right angled triangle are 6 cm & 4 cm, Construct the triangle.
 - b. Base of the triangle 'a', base adjacent acute angle 'z' and the sum of other two sides is 's' are given. Construct the triangle with description.
 - c. Construct a triangle with description whose perimeter is p and base adjacent angles $\angle x$ & $\angle y$
2. The length of the hypotenuse and a side of a right angled triangle are 6 cm & 4 cm respectively.
 - a. Construct the triangle.
 - b. Construct a circle circumscribing the given triangle. (Sign & description are required)
 - c. Draw a tangent to the circle which is perpendicular to a given straight line. (Sign & description are required)
3. $a = 4$ cm, $b = 5.2$ cm and $\angle x = 65^\circ$
 - a. If the length of two sides are equal to the length of a & b of a triangle and $\angle x$ included angle of that two sides, the construct the triangle.
 - b. Construct a circle circumscribing of a equilateral triangle of side is equal to the length 'a' with sign & description of figure.
 - c. Construct a rhombus considering the length of two diagonals are equal to the length 'a' & 'b' with sign & description of figure.
4. $a = 4.5$ cm, $b = 2.3$ cm, $p = 11$ cm, $\angle x = 70^\circ$, $\angle y = 60^\circ$ & $\angle z = 35^\circ$
 - a. The length of the hypotenuse and a side of a right angled triangle are 6 cm & 4 cm, Construct the triangle.
 - b. Base of the triangle 'a', base adjacent acute angle 'z' and the difference of other two sides is 'b' are given. Construct the triangle with description.
 - c. Construct a triangle with description whose perimeter is p and base adjacent angles $\angle x$ & $\angle y$
5. $a = 4$ cm, $b = 5.2$ cm, $p = 11$ cm, $\angle x = 75^\circ$, $\angle y = 45^\circ$ & $\angle z = 20^\circ$
 - a. If the length of the two sides are equal to the length of a & b of any triangle and $\angle y$ is included angle of that two sides, construct the triangle.
 - b. Construct a triangle with description whose perimeter is p and base adjacent angles $\angle x$ & $\angle y$.

Construct two tangents to a circle of radius 'a' with description where angle between two tangents is equal to $3\angle z$.

Question ► 7 The base adjacent two angles are 60° and 45° and the perimeter is 12 cm. [All Board-18]

- a. Draw a 45° angle by using scale and compass. 2
- b. According to the stem construct a triangle. [Sign and description of construction are essential.] 4

- c. Construct an equilateral triangle whose perimeter is equal to the perimeter of the given triangle. [Sign and description of construction are essential.] 4

Solution to the question no. 7

Question ► 11 $\angle x$ and $\angle y$ are two angles. a, b, c are three line segments where $a > b > c$. [Dj. B. 17]

- Draw a triangle with three sides a, b, c . 2
- The base of a parallelogram is b unit and the length of two diagonals are a unit and c unit. Construct the parallelogram and give description of construction. 4
- The parallel sides of a trapezium are a unit and b unit respectively and $\angle x$ and $\angle y$ be two angles adjacent to the side a . Construct the trapezium and give description of the construction. 4

Question ► 9 The base of a triangle $a = 5$ cm, a base adjacent acute angle $\angle x = 40^\circ$ and the difference of the other two sides is $b = 2$ cm. [C. B. 17]

- Present the given information in figures. 2
- Construct the triangle with description of construction. 4
- Draw a right angled triangle whose one of the right angle adjacent sides is ' a ' and the difference of the hypotenuse and other side is ' b '. [Sign of construction and description is compulsory.] 4

Solution to the question no. 9

Question ► 8 In a triangle the length of base is 3.5 cm, a base adjacent angle is 60° and the sum of other two sides is 8 cm. [D.B. 17]

- By using pencil compasses draw a 60° angle. 2
- Draw the triangle with description. 4
- Considering base as height and using other information draw a triangle. (Sign of construction and description is compulsory). 4

Solution to 8

Question ► 2 $a = 4\text{ cm.}$, $b = 5.2\text{ cm.}$ and $\angle x = 65^\circ$. [R.B. 19]

- If the length of two sides are equal to the length of a and b of any triangle and $\angle x$ as included angle of that two sides, then construct the triangle. 2
- Construct a circle circumscribing of a equilateral triangle of side is equal to the length of a with sign and description of the figure. 4
- Construct a rhombus considering the length of two diagonals are equal to the length a and b with sign and description of the figure. 4

Question ► 1 $s = 11\text{ cm}$, $r = 4\text{ cm}$, $\angle X = 75^\circ$, $\angle Y = 60^\circ$ and $\angle Z = 20^\circ$. [D.B. 19]

- Draw a rhombus whose one angle is $\angle Y$ and a side is 4 cm. 2
- Construct a triangle with description whose perimeter is s and base adjacent angles are $\angle X$ and $\angle Y$. 4
- Construct two tangents to a circle of radius r with description the angle between the tangents is equal to $3 \angle Z$. 4

Solution to 1