WORKSHEET 1

CHAPTER 13 – CONSTRUCTIONS

1. To draw a pair of tangents to a circle which are inclined to each other at an angle of 60°, it is required to draw tangents at the end points of the two radii of the circle, which are inclined at an angle of
   (*a*) 135° (*b*) 120° (*c*) 60° (*d*) 90°
2. If you draw a pair of tangents to a circle C(O, *r*) from point P such that OP = 2*r*, then the angle between the two tangents is
   (*a*) 90° (*b*) 30° (*c*) 60° (*d*) 45°
3. Draw a circle of radius 5 cm. Take a point P on it. Without using the centre of the circle construct a tangent at the point P.
4. Draw a line segment of length 5.8 cm and divide it internally in the ratio 3 : 4.
5. Draw a circle of radius 3.5 cm. From a point P outside the circle at a distance of 6 cm from its centre, draw two tangents to the circle.
6. Draw a pair of tangents to a circle of radius 2.3 cm which are inclined to each other at an angle of 60°.
7. Draw a ΔABC with side BC = 7 cm, $\angle B = 45°$ and $\angle A = 105°$. Then construct a triangle whose sides are $\frac{4}{3}$ times the corresponding sides of ΔABC.
8. Construct a quadrilateral ABCD with $\angle A = 45°$, AB = 5.1 cm, AC = 6 cm, AD = 4.2 cm and BC = 3.6 cm. Construct a quadrilateral AB′C′D′ similar to quadrilateral ABCD such that its diagonal AC′ = 8 cm.
9. From a point P on the circle of radius 2.2 cm, draw a tangent to the circle. Write the steps of construction.
10. Construct an isosceles triangle having base BC = 6 cm and altitude = 4 cm. Now construct a triangle similar to ΔABC, each of whose sides is $\frac{3}{2}$ of the corresponding side of ΔABC.

Name: ..... Teacher's signature: .....

Class: X ..... Date: .....

ANSWERS

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1. (*b*) 120°
2. (*c*) 60°