Chapter - 11

(Constructions)

Key Concept

(1) Use only ruler and compass while drawing constructions.

(2) Protractor may be used for drawing non-standard angles.

(3) Constructions of a triangle given its base, a base angle and the difference of the other two sides.

(4) Constructions of a triangle given its perimeter and its two base angles.

Section - A

Q.1 With a ruler and compass which of the following angles cannot be constructed?

(a) 60^0 (b) 80^0 (c) 90^0 105^0

Q.2 With a ruler and compass which of the following angles can be constructed?

(a) 80^0 (b) 90^0 (c) 100^0 110^0

Section - B

Q.3 Construct an angle of 45^0 at the initial point of a given ray and justify the construction.

Q.4 Construct the following angles and verify by measuring them by a protractor.

(i) 75^0 (ii) 135^0

Section - C

Q.5 Construct a ΔPQR with base $QR = 3.8cm,\ \angle Q = 75^0$ and $PQ + PR = 7.9cm$

Q.6 Construct a ΔPQR with base $QR = 3.4cm, \angle R = 75^0 and\ PR - PQ = 1.2cm$

Q.7 Construct an equilateral triangle with sides 4cm.

Section -D

Q.8 Construct a triangle ABC in which $\angle B = 60^0,\ \angle C = \angle 45^0$ and AB+BC+CA = 13 cm.

Q.9 Construct a right triangle whose base is 12cm and sum of its hypotenuse and other side is 18cm.

Q.10 Construct a ΔPQR with its perimeter = 11cm and the base angles of 75^0 and 30^0.

Answers:

Q.1 b Q.2 b