RD SHARMA

Solutions

Class 6 Maths

Chapter 18

Ex 18.1

1.) Construct the following angles using set- squares:

Answer:

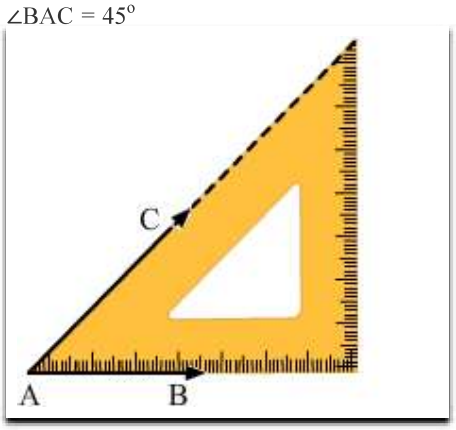
(i) 45º

Place 45º set- square.

Draw two rays AB and AC along the edges from the vertex from the vertex of 45º angle of the set- square.

The angle so formed is a 45 º angle.

$\angle BAC = 45^o$



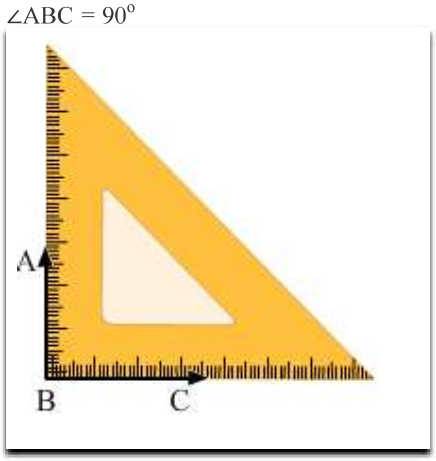
(ii) 90º

Place = 90º set –square as shown in the figure.

Draw two rays BC and BA along the edges from the vertex of 90º angle.

The angle so formed is 90º angle.

$\angle ABC = 90^o$



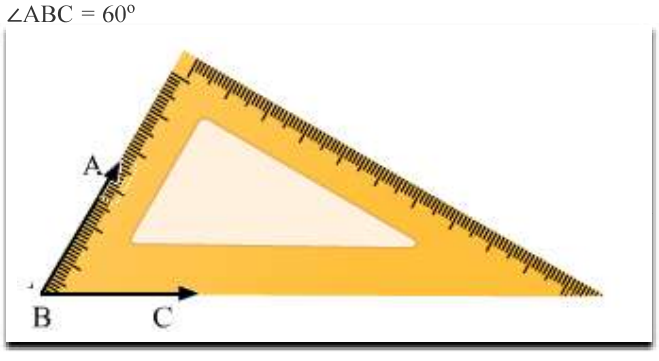
(iii) 60º

Place 30º set –square as shown in the figure.

Draw the rays BA and BC along the edges from the vertex of 60º

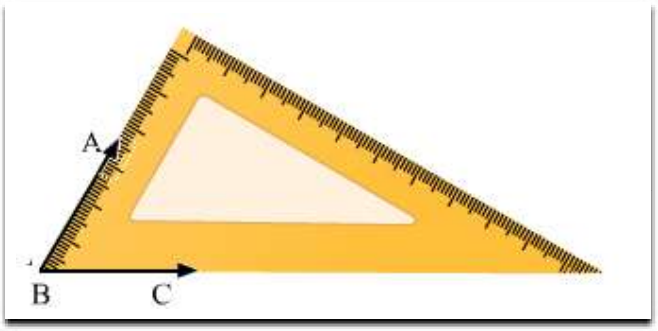
The angle so formed is 60º

$\angle ABC = 60^o$



(iv) 105°

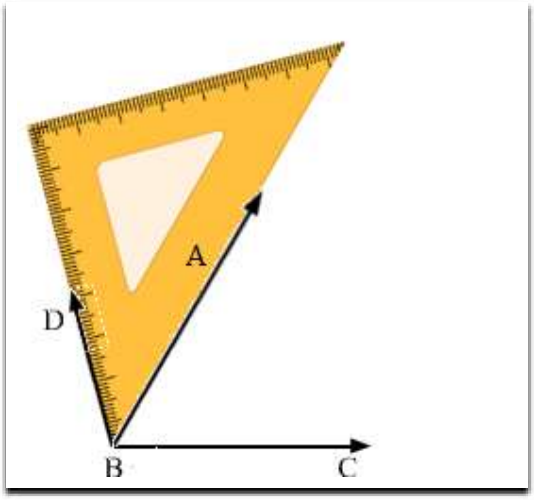
Place 30° set –square and make an angle 60° by drawing the rays BA and BC as shown in figure.



Now place the vertex of 45° of the set –square on the ray BA as shown in figure and draw the ray BD.

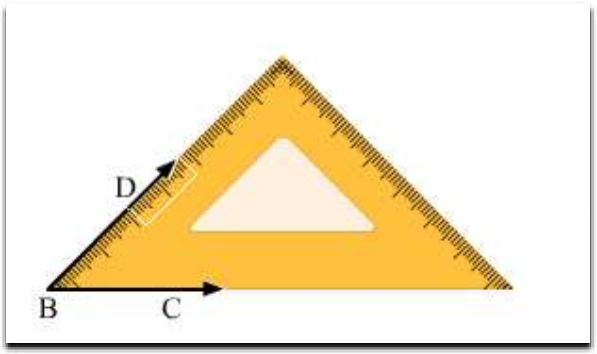
The angle so formed is 105°

Therefore, ∠DBC = 105°



(v) 75°

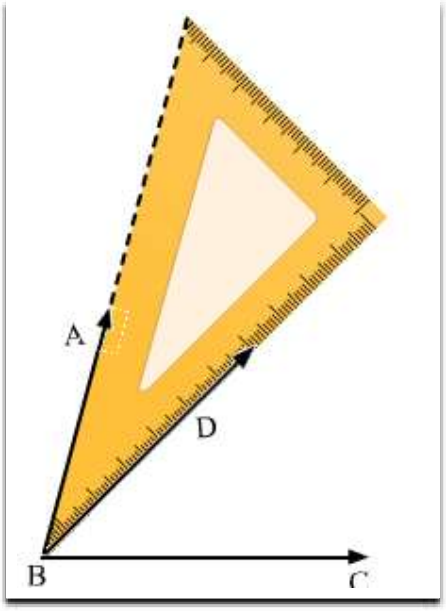
Place 45° set –square and make an angle of 45° by drawing the rays BD and BC as shown in the figure.



Now place the vertex of 30° of the set- square on the ray BD as shown in the figure and draw the ray BA.

The angle so formed is 75°.

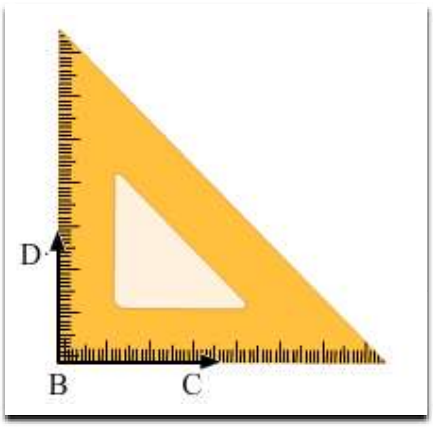
Therefore, ∠ABC = 75°



(Line BD is hidden)

(vi) 150°

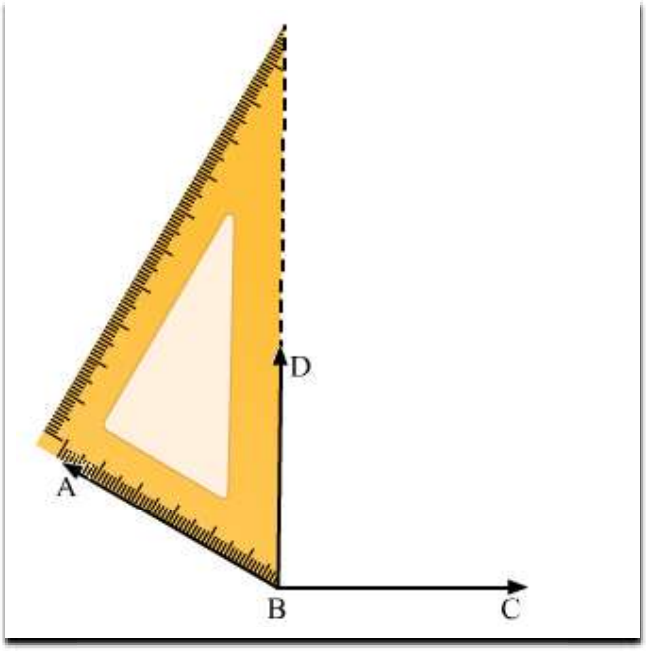
Place the vertex of 45° of the set – square and make angle of 90° by drawing the rays BD and BC as shown in the figure



Now, place the vertex of 30° of the set –square on the ray BS as shown in the figure and draw the ray BA

The angle so formed is 150°.

Therefore, $\angle ABC = 150^{o}$



2.) Given a line BC and a point A on it, construct a ray AD using set – squares so that ∠DAC is

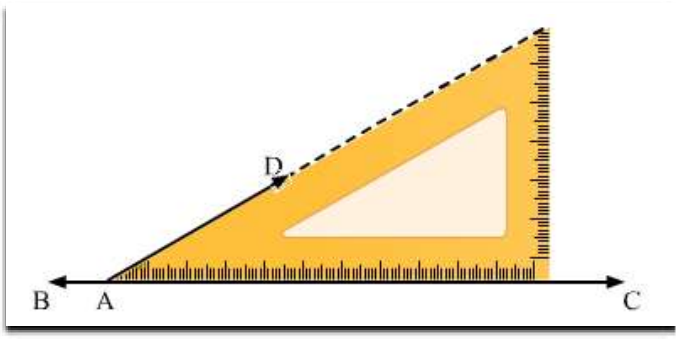
(i) 30°

(ii) 150°

Answer:

(i) Draw a line BC and take a point A on it. Place 30° set –square on the line BC such that its vertex of 30° angle lies on point A and one edge coincides with the ray AB as shown in figure

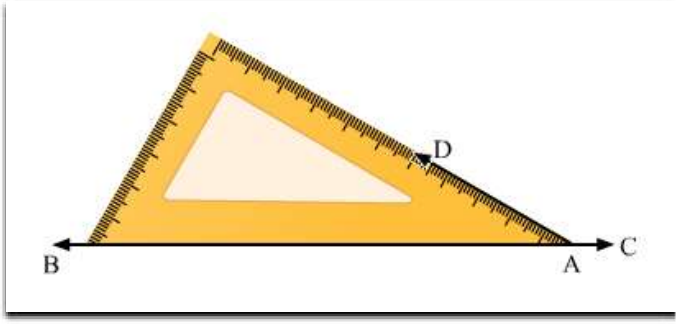
Draw the ray AD.



Thus ∠DAC is the required angle of 30°

(ii) Draw a line BC and take a point A on it. Place 30° set –square on the line BC such that its vertex of 30° angle lies on point A and one edge coincides with the ray AB as shown in the figure.

Draw the ray AD.



Therefore, ∠DAB = 30°

We know that angle on one side of the straight line will always add to 180^o

Therefore, $\angle DAB + \angle DAC = 180^o$

Therefore, $\angle DAC = 150^o$