

Exercise 15C

Q1

Answer:

(i) Consider numbers 1, 1 and 1.

Clearly, 1 + 1 >1

1+1>1

1+1>1

Thus, the sum of any two sides is greater than the third side.

Hence, it is possible to draw a triangle having sides 1 cm, 1 cm and 1 cm.

(ii)

Clearly, 2 + 3 >4

3+4>2

2+4 > 3

Thus, the sum of any two sides is greater than the third side. Hence, it is possible to a draw triangle having sides 2 cm, 3 cm and 4 cm.

(iii

Clearly, 7 + 8 = 15

Thus, the sum of these two numbers is not greater than the third number. Hence, it is not possible to draw a triangle having sides 7 cm, 8 cm and 15 cm.

(iv) Consider the numbers 3.4, 2.1 and 5.3.

Clearly: 3.4 + 2.1 >5.3

5.3 + 2.1 > 3.4

5.3 + 3.4 > 2.1

Thus, the sum of any two sides is greater than the third side. Hence, it is possible to draw a triangle having sides 3.4 cm, 2.1 cm and 5.3 cm.

(v) Consider the numbers 6, 7 and 14.

Clearly, 6+7 ≯ 14

Thus, the sum of these two numbers is not greater than the third number. Hence, it is not possible to draw a triangle having sides 6 cm, 7 cm and 14 cm.

Q2

Answer:

Let the length of the third side be x cm.

Sum of any two sides of a triangle is greater than the third side.

..5 + 9 > x

 $\Rightarrow x < 14$

Hence, the length of the third side must be less than 14 cm.

Q3

Answer:

- (i) >
- (ii) >
- (iii) <

The reason for the above three is that the sum of any two sides of a triangle is greater than the third side

******* END ******