



Triangle Inequality Theorem

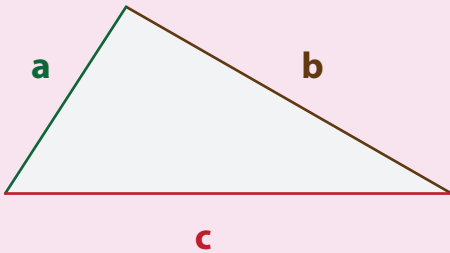
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Triangle Inequality Theorem

The sum of the lengths of any two sides of a triangle is greater than the length of the third side.



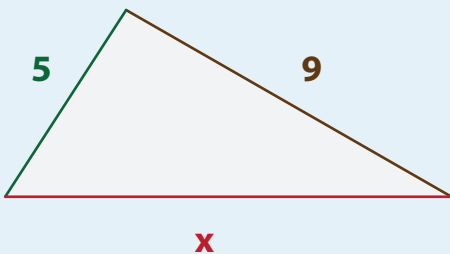
$$a + b > c$$

$$a + c > b$$

$$b + c > a$$

Range of third side of the Triangle

To find the range of the third side of the triangle from the given other two sides.



$$9 - 5 < x < 9 + 5$$

$$4 < x < 14$$

Therefore, the third side of the triangle lies between 4 and 14.