

# Triangle Inequalities

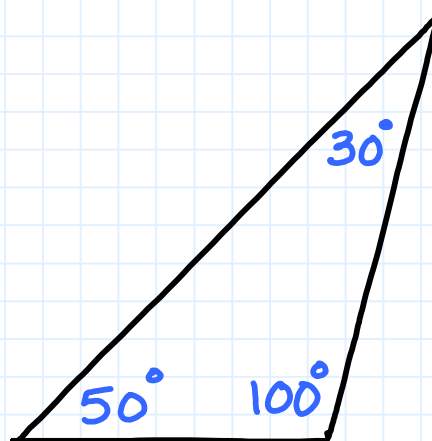
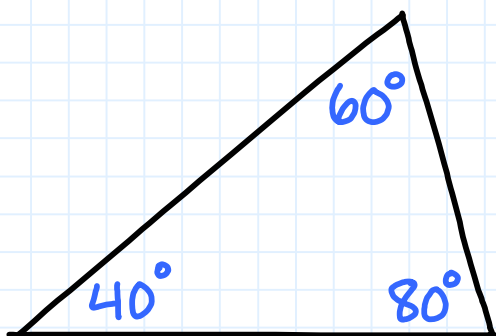


## Overview of problems

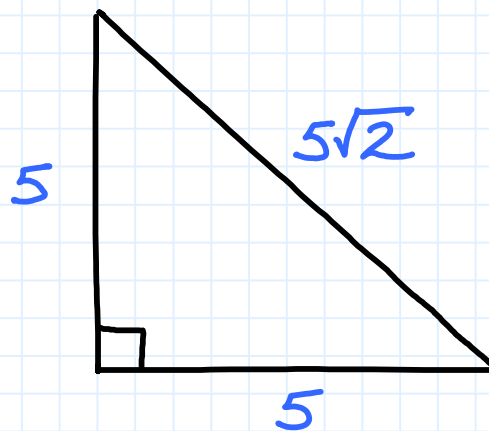
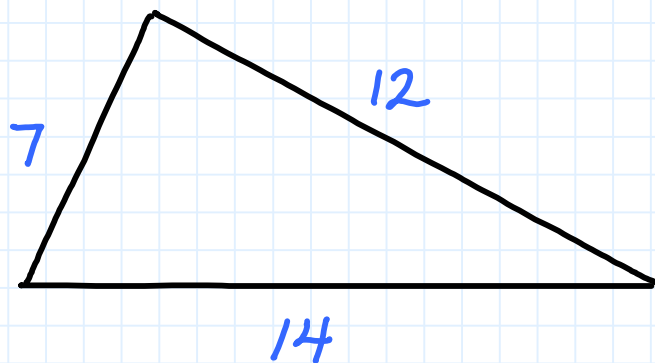


Example Set: A

Name the longest and shortest side of the triangle



Name the largest and smallest angle of the triangle





## Example Set: B

Determine if it's possible for a triangle to have the following lengths

4, 6, 9

8, 9, 4

14, 8, 5

19, 15, 4

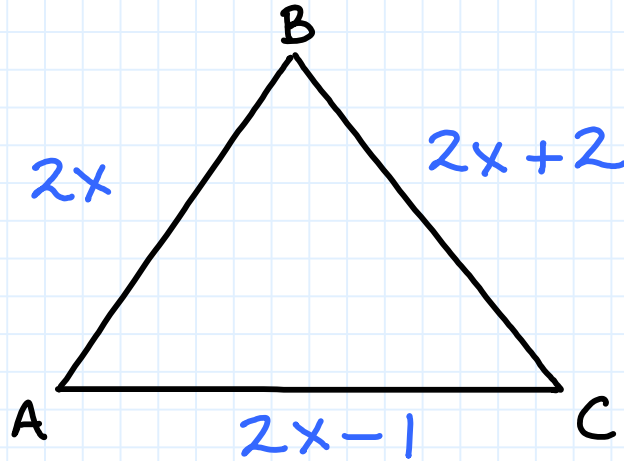
13, 12, 11



## Example Set: C

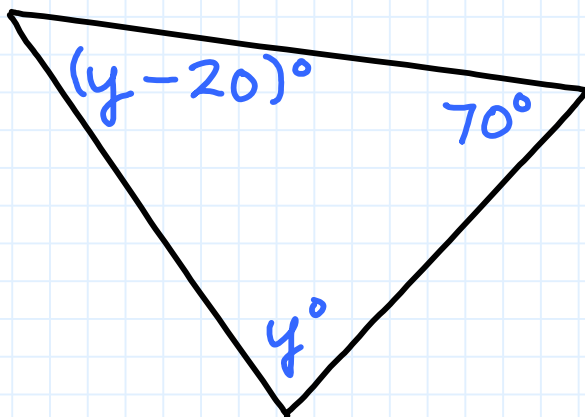
Determine which angles of the triangle is the largest.

note: the figure is not to be assumed to be drawn to scale.



Determine which side of the triangle is the longest.

note: the figure is not to be assumed to be drawn to scale.



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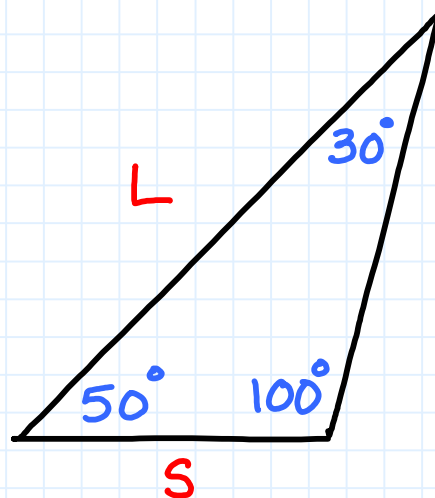
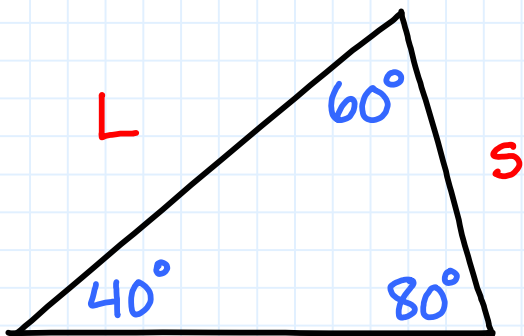


## Overview of problems- KEY

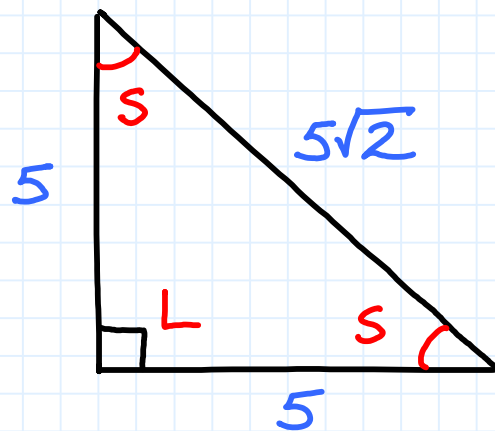
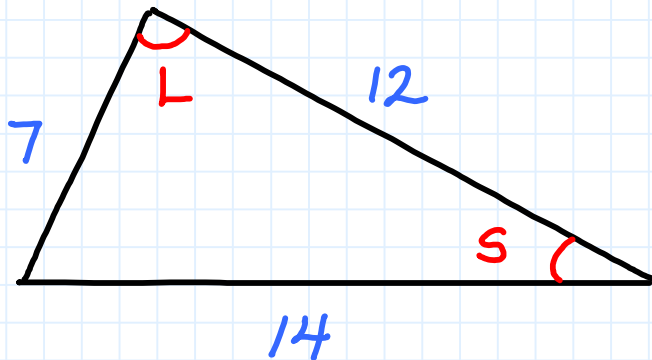


Example Set: A

Name the longest and shortest side of the triangle



Name the largest and smallest angle of the triangle





## Example Set: B

Determine if it's possible for a triangle to have the following lengths

4, 6, 9      yes

8, 9, 4      yes

14, 8, 5      NO

19, 15, 4      NO

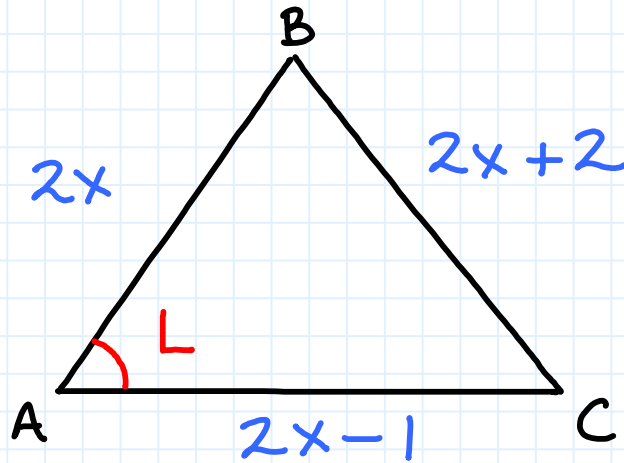
13, 12, 11      yes



## Example Set: C

Determine which angles of the triangle is the largest.

note: the figure is not to be assumed to be drawn to scale.



Determine which side of the triangle is the longest.

note: the figure is not to be assumed to be drawn to scale.

