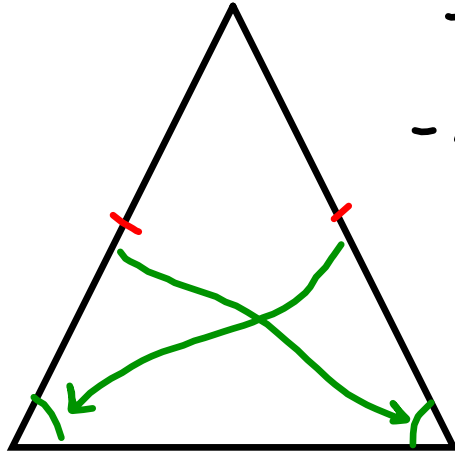


Section 4.7 Isosceles Triangles

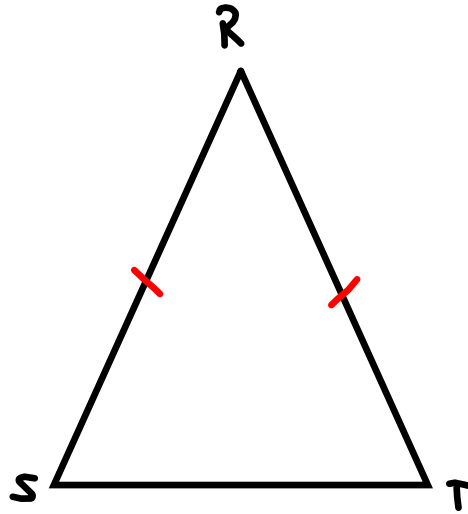
Obj: Use properties of isosceles and equilateral triangles.



Isosceles Triangle - two sides (legs) are congruent

- if two sides are congruent then angles opposite of those sides are also congruent.

- if two angles of a triangle are congruent then the sides opposite those angles are congruent.



$$m\angle S = \cancel{7x} - 17$$

$$m\angle T = 3x + 35$$

find x , $m\angle S$ and $m\angle T$ and $m\angle R$

$$x \rightarrow 7x - 17 = 3x + 35 \rightarrow \boxed{x = 13}$$

$$m\angle S \rightarrow 7(13) - 17 = \boxed{74^\circ}$$

$$m\angle T \rightarrow 3(13) + 35 = \boxed{74^\circ}$$

$$m\angle R \rightarrow 180^\circ - 74^\circ - 74^\circ = \boxed{32^\circ}$$

Equilateral Triangle

- 1) A triangle is equilateral if and only if it is equiangular
- 2) All angles in an equilateral triangle measure 60° .

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1-4 all, 20-27 all

40-42 all, 45-47 all