

# Triangle Congruence

SSS

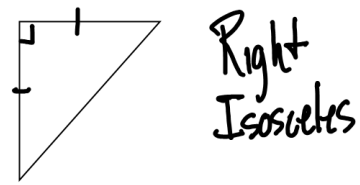
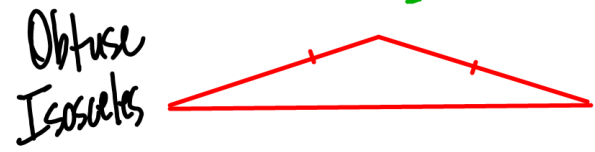
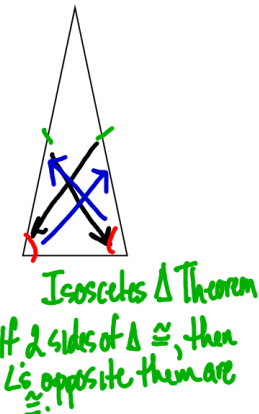
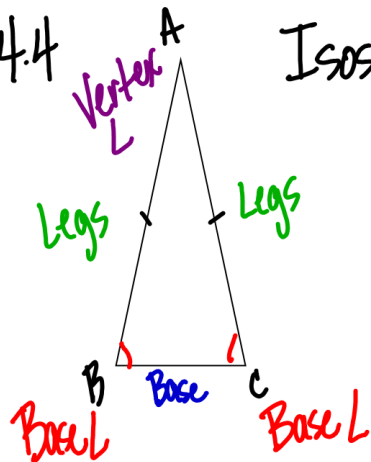
SAS

ASA

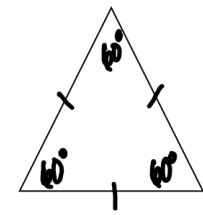
HL

AAS

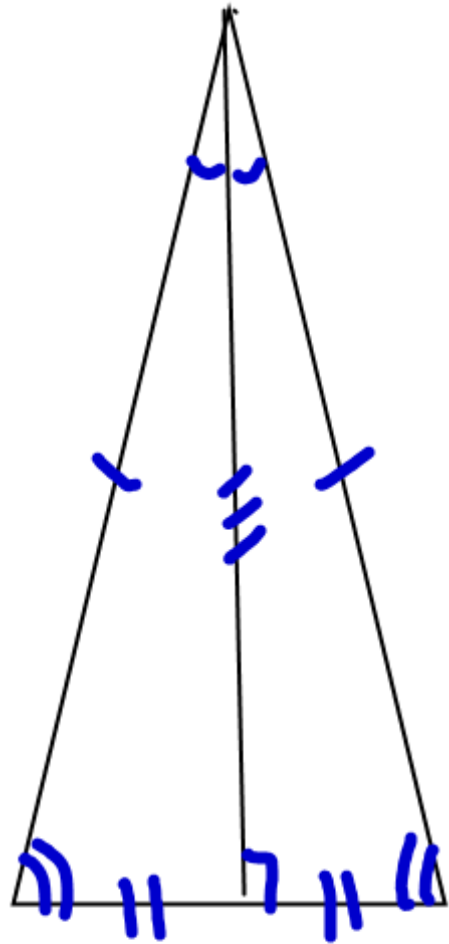
# 4.4 Isosceles Triangle



Right Isosceles

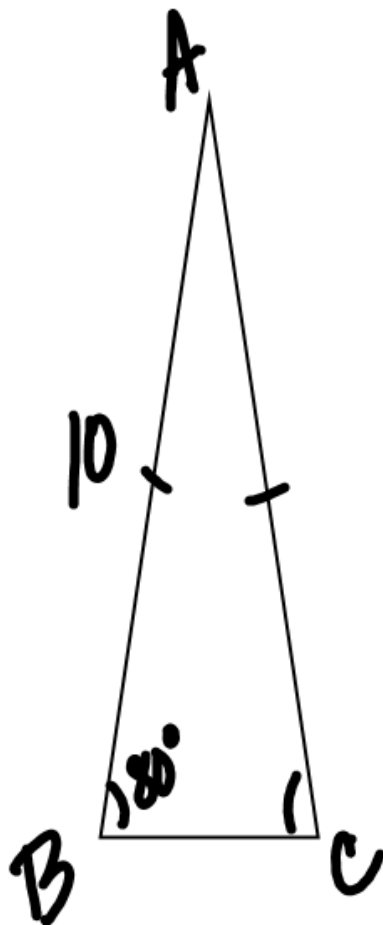


Equilateral  $\Delta$   
The measure of each  $\angle$  of an equilateral  $\Delta$  is  $60^\circ$



## Corollary

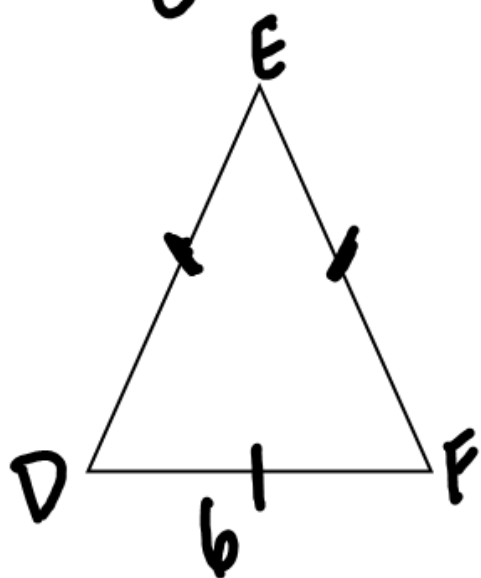
The bisector of the vertex  $L$  of an isosceles  $\Delta$  is the  $\perp$  bisector of the base



$$AC = 10$$

$$m\angle C = 80^\circ$$

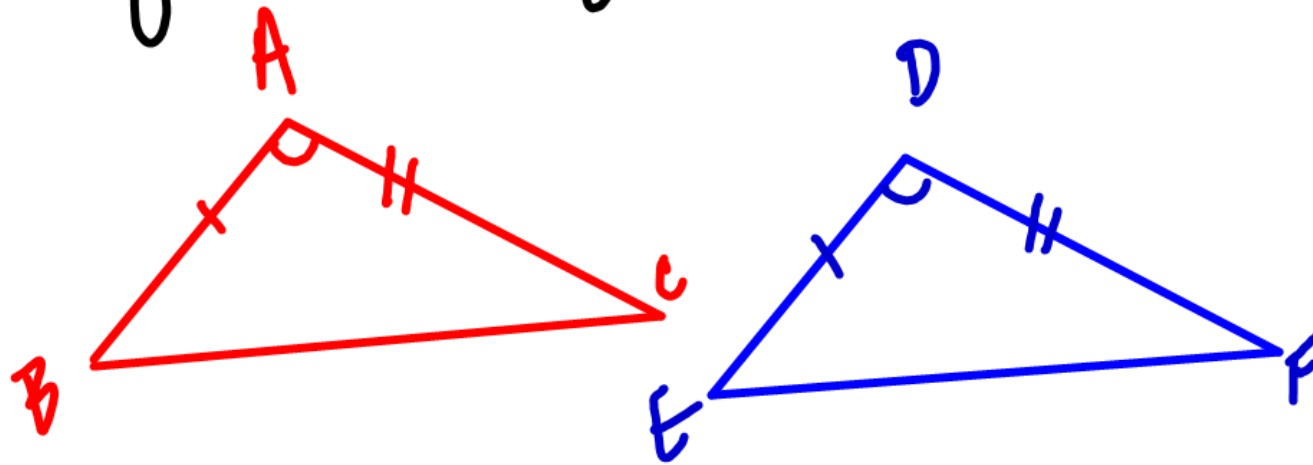
$$m\angle A = 20^\circ$$



$$DE = 6$$

$$m\angle F = 60^\circ$$

# Corresponding Parts of Congruent Triangles are Congruent

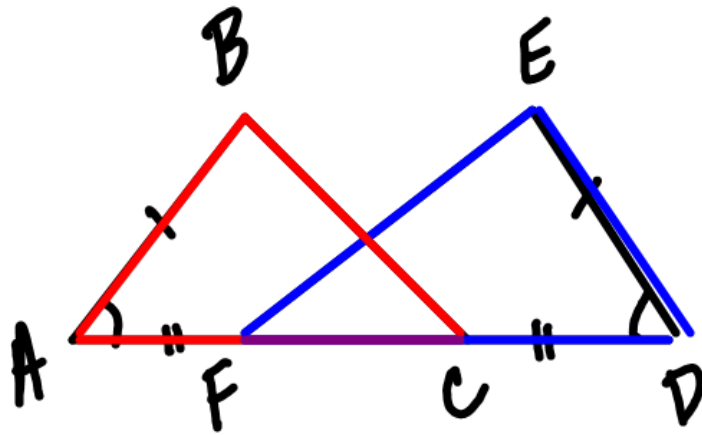


$$\triangle ABC \cong \triangle DEF \quad \text{SAS Post.}$$

$$\angle B \cong \angle E \quad \text{CPCTC}$$

$$\overline{BC} \cong \overline{EF} \quad \text{CPCTC}$$

$$\angle C \cong \angle F \quad \text{CPCTC}$$



### Statements

### Reasons

1.  $\angle A \cong \angle D, AB = DE, AF = DC$

1. Given

2.  $FC = FC$

2. Reflexive Prop

3.  $AC = DF$

3. Overlapping Segments  
Thm.

4.  $\triangle ABC \cong \triangle DEF$

4. SAS Post.

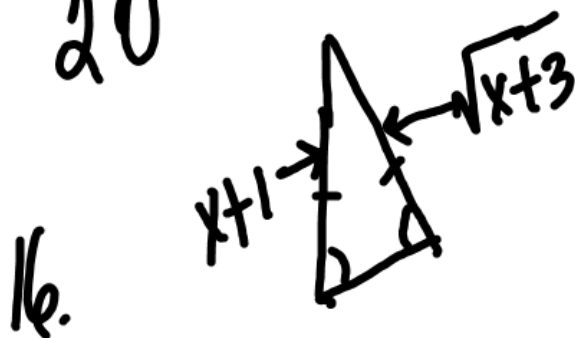
5.  $\angle B \cong \angle E$

5. CPCTC

p240

10 - 17 All

20



$$(x+1)^2 = (\sqrt{x+3})^2$$

folll

$$(x+1)(x+1) = x+3$$