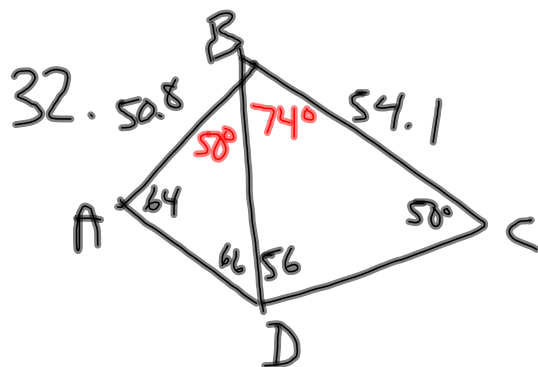
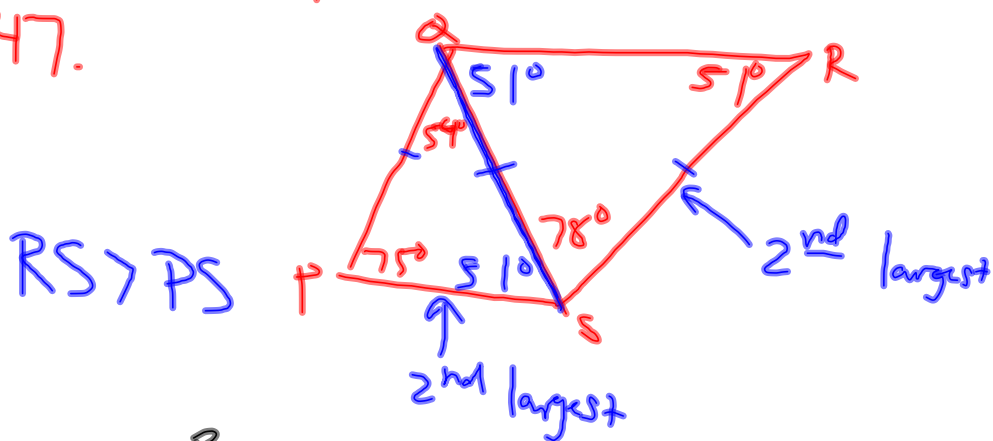


$\angle Q, \angle P, \angle R$

47.



$\triangle BCD$

~~$BD < BC < CD$~~

$\triangle ABD$

~~$AD < BD < AB$~~

$AD, BD, AB, BC, CD$

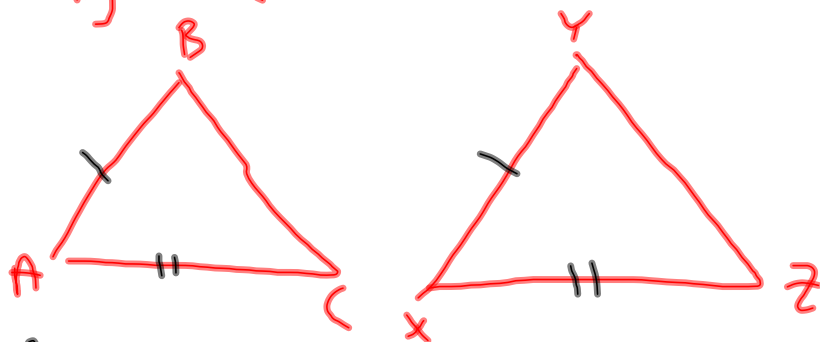
0-5 +

6-10 ✓

119-

## 5.6 Inequalities in $\Delta$ 's

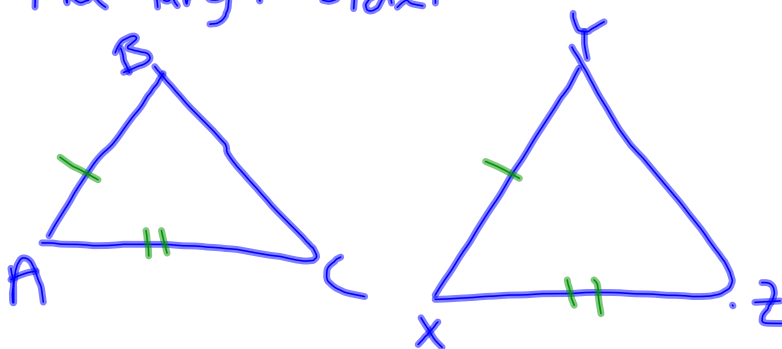
Hinge Thm: if 2 sides of a  $\Delta$  are  $\cong$  to 2 sides of another  $\Delta$  and the included  $\angle$ 's are not  $\cong$ , then the larger 3<sup>rd</sup> side is across from the larger included  $\angle$ .



if  $m\angle A > m\angle X$ , then  $BC > YZ$

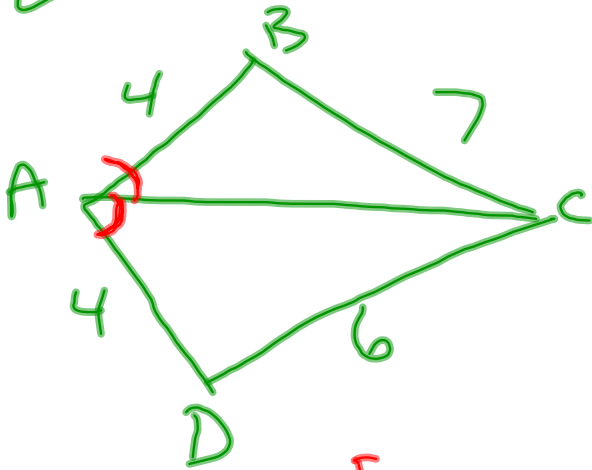
Converse of the Hinge thm:

If 2 sides of 1  $\Delta$  are  $\cong$  to 2 sides of another  $\Delta$ , and the included  $\angle$ 's are not  $\cong$ , then the larger  $\angle$  is opposite the larger side.

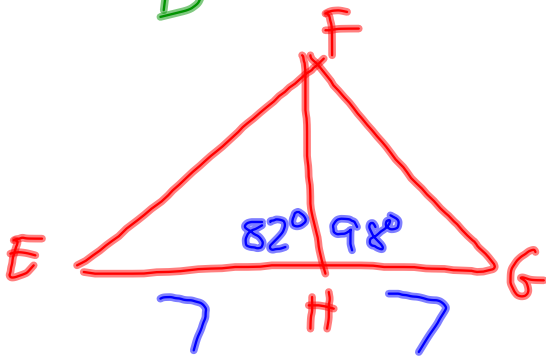


If  $BC > YZ$ ,  $m\angle A > m\angle X$

Ex: Compare  $m\angle BAC$  +  $m\angle DAC$



$$m\angle BAC > m\angle DAC$$



Compare  $EF$  +  $FG$

$$EF < FG$$

HW: p. 343

1-23, skip 8, 16, 17