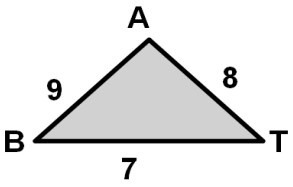
6-4 Inequalities in 1 Triangle

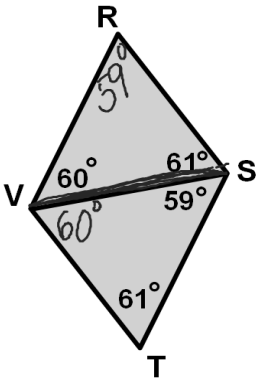
Dec. 1

ex. 1



$m\angle A < m\angle B < m\angle T$

ex. 2



$\overline{RV}$ longest
$\overline{VT}$ shortest

Find longest and shortest sides in quad. *RSTV.*

$\triangle RSV$: $RV > RS > VS$

$\triangle SVT$: $VS > TS > VT$

$RV > RS > VS > TS > VT$

ex. 3 **Can a triangle have side lengths of 2 cm, 3 cm, and 5 cm?** NO

$2 + 3 \not> 5$

triangle inequality thm

ex. 4 **If 2 sides of a triangle are 8 and 13, between what 2 numbers must the 3rd side lie?**

$13-8 < x < 13+8$

$5 < 3\text{rd side} < 21$

$x > 5$ $\quad x < 21$