Geometry 5.6

Apply the hinge theorem and its converse to make comparisons

Prove triangle relationships using the hinge theorem and its converse

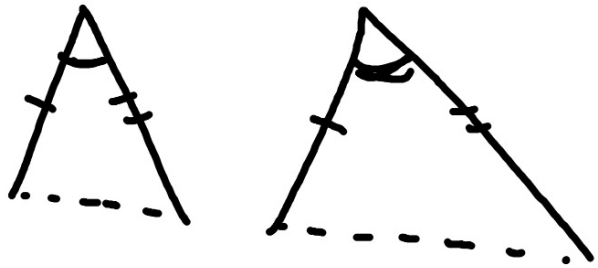
SAS

included angle

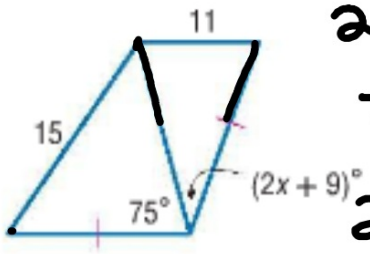
hinge theorem

Quiz today 5.3 &5.5

Quiz Mon. 5.6



18.

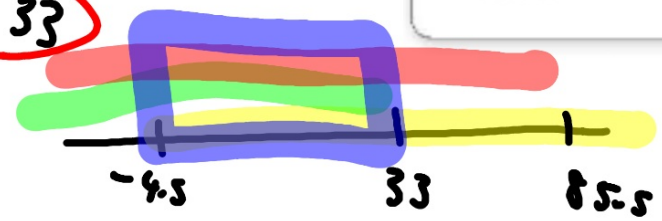


$2x+9 > 0$
$-9 \quad -9$
$2x > -9$
$x > -4.5$

$2x+9 < 180$
$-9 \quad -9$
$2x < 171$
$x < 85.5$

$2x+9 < 75$
$-9 \quad -9$
$2x < 66$
$x < 33$

$-4.5 < x < 33$



StudyTip

Using Additional Facts

When finding a range for the possible values for x, you may need to use one of the following facts.

- The measure of any angle is always greater than 0 and less than 180.
- The measure of any segment is always greater than 0.

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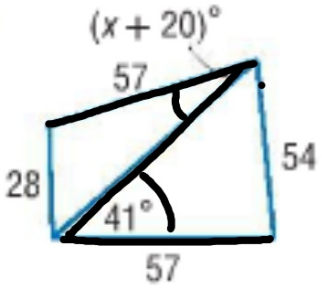


$x + 20 < 41$
$-20 \quad -20$
$x < 21$

StudyTip

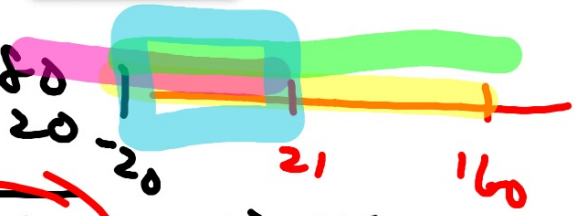
Using Additional Facts

When finding a range for the possible values for x, you may need to [illegible] facts.

- The measure of any angle is always greater than 0 and less than 180.
- The measure of any segment is always greater than 0.

$x + 20 > 0$
$-20 \quad -20$
$x > -20$

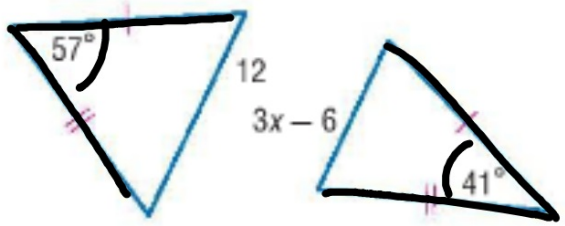
$x + 20 < 180$
$-20 \quad -20$
$x < 160$



$-20 < x < 21$

Find the range of possible values for x.

17.



$3x-6>0$

$\frac{3x}{3} > \frac{6}{3}$

$x > 2$

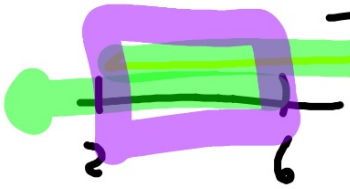
$2<x<6$

$3x-6<12$

$+6 \quad +6$

$3x<18$

$x<6$



20.