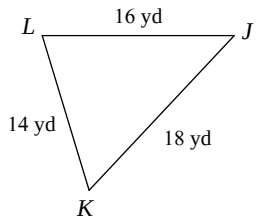
Candle Center - Infinite Geometry Name_____

Inequalities in One Triangle

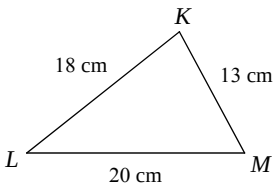
Date_____ Period____

Order the angles in each triangle from smallest to largest.

1)



2)

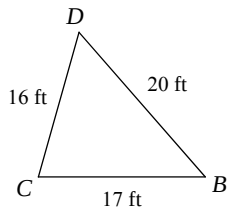


3) In ΔRQP
$QP = 15$ ft
$RP = 25$ ft
$RQ = 13$ ft

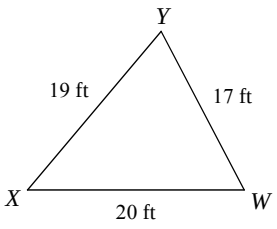
4) In ΔTUV
$UV = 17$ yd
$TV = 14$ yd
$TU = 9$ yd

Name the largest and smallest angle in each triangle.

5)



6)

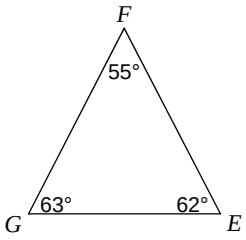


7) In ΔUVW
$VW = 13$ m
$UW = 11.7$ m
$UV = 5.8$ m

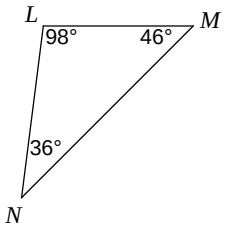
8) In ΔEFG
$FG = 10.9$ in
$EG = 17$ in
$EF = 10.9$ in

Order the sides of each triangle from shortest to longest.

9)



10)

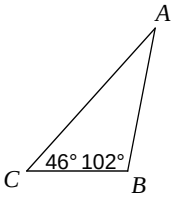


11) In ΔVWX
$m\angle V = 50°$
$m\angle W = 48°$
$m\angle X = 82°$

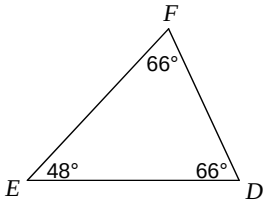
12) In ΔSTU
$m\angle S = 50°$
$m\angle T = 70°$
$m\angle U = 60°$

Name the longest and shortest side in each triangle.

13)



14)



15) In ΔDEF
$m\angle D = 35°$
$m\angle F = 95°$

16) In ΔKLM
$m\angle K = 50°$
$m\angle L = 100°$
$m\angle M = 30°$

Critical thinking questions:

17) In triangle ABC:
AB is the longest side.
70° is the measure of angle B.

Find the range of possible measures for angle A.

18) In triangle XYZ:
XY is the shortest side.
30° is the measure of angle Y.

Find the range of possible measures for angle X.

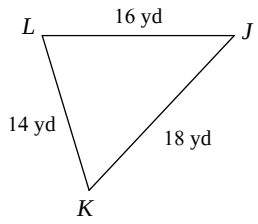
Candle Center - Infinite Geometry Name_____

Inequalities in One Triangle

Date_____ Period____

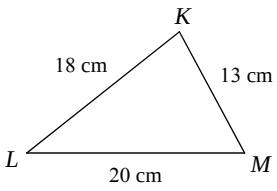
Order the angles in each triangle from smallest to largest.

1)



∠J, ∠K, ∠L

2)



∠L, ∠M, ∠K

3) In Δ*RQP*
QP = 15 ft
RP = 25 ft
RQ = 13 ft

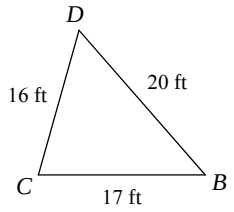
∠P, ∠R, ∠Q

4) In Δ*TUV*
UV = 17 yd
TV = 14 yd
TU = 9 yd

∠V, ∠U, ∠T

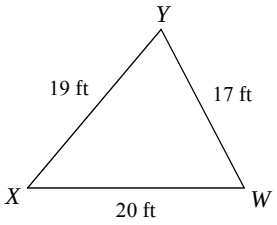
Name the largest and smallest angle in each triangle.

5)



∠C, ∠B

6)



∠Y, ∠X

7) In Δ*UVW*
VW = 13 m
UW = 11.7 m
UV = 5.8 m

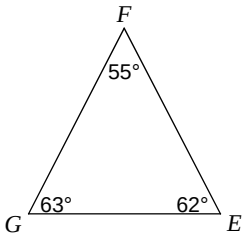
∠U, ∠W

8) In Δ*EFG*
FG = 10.9 in
EG = 17 in
EF = 10.9 in

∠F; ∠E and ∠G

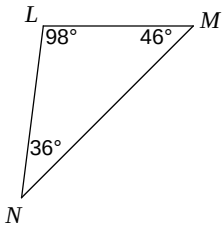
Order the sides of each triangle from shortest to longest.

9)



$\overline{GE}, \overline{GF}, \overline{FE}$

10)



$\overline{LM}, \overline{LN}, \overline{MN}$

11) In ΔVWX
$m\angle V = 50°$
$m\angle W = 48°$
$m\angle X = 82°$

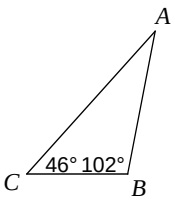
$\overline{VX}, \overline{WX}, \overline{VW}$

12) In ΔSTU
$m\angle S = 50°$
$m\angle T = 70°$
$m\angle U = 60°$

$\overline{TU}, \overline{ST}, \overline{SU}$

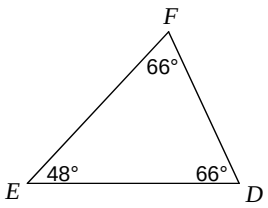
Name the longest and shortest side in each triangle.

13)



$\overline{AC}, \overline{BC}$

14)



$\overline{EF}$ and $\overline{DE}$; $\overline{DF}$

15) In ΔDEF
$m\angle D = 35°$
$m\angle F = 95°$

$\overline{DE}, \overline{EF}$

16) In ΔKLM
$m\angle K = 50°$
$m\angle L = 100°$
$m\angle M = 30°$

$\overline{KM}, \overline{KL}$

Critical thinking questions:

17) In triangle ABC:
AB is the longest side.
70° is the measure of angle B.

Find the range of possible measures for angle A.

$0 < A < 40°$

18) In triangle XYZ:
XY is the shortest side.
30° is the measure of angle Y.

Find the range of possible measures for angle X.

$120° < X < 150°$