

5.2 & 5.4 – Congruent, Isosceles, & Equilateral Triangles

Find the following using the given diagrams.

1. $\triangle GHU \cong \triangle TKL$

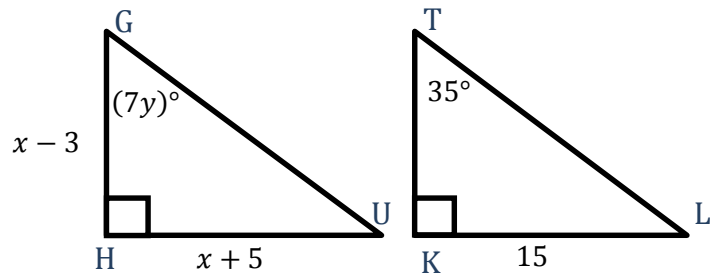
$x =$ _____

$y =$ _____

$m\angle G =$ _____

$m\angle U =$ _____

$GH =$ _____



2. $\triangle KIT \cong \triangle CAR$

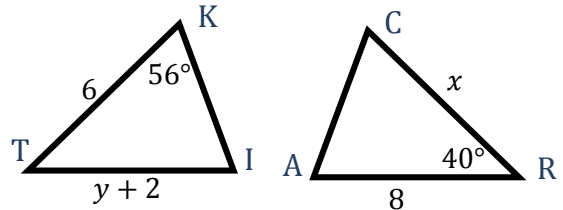
$x =$ _____

$y =$ _____

$m\angle C =$ _____

$m\angle T =$ _____

$TI =$ _____



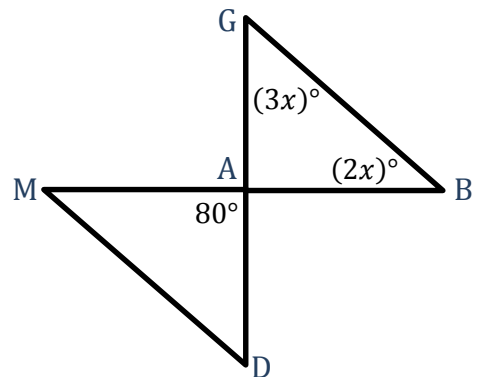
3. $\triangle MAD \cong \triangle GAB$

$x =$ _____

$m\angle GAB =$ _____

$m\angle ABG =$ _____

$m\angle AMD =$ _____



4. $\triangle TAC \cong \triangle BER$

$x =$ _____

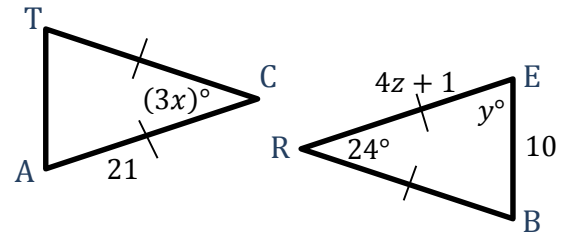
$y =$ _____

$z =$ _____

$m\angle A =$ _____

$m\angle C =$ _____

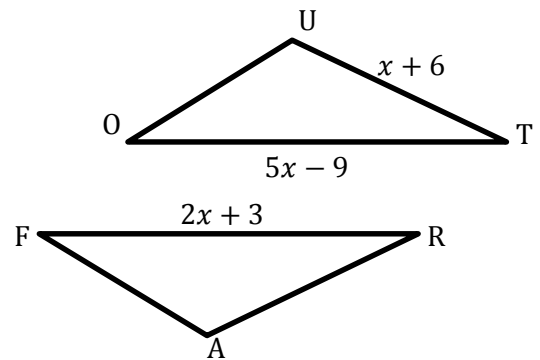
$RE =$ _____



5. $\triangle FAR \cong \triangle UOT$

Equation: _____

$x =$ _____

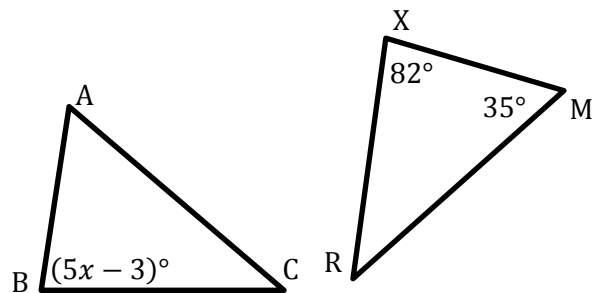


6. $\triangle ABC \cong \triangle MXR$

Equation: _____

$x =$ _____

$m\angle R =$ _____



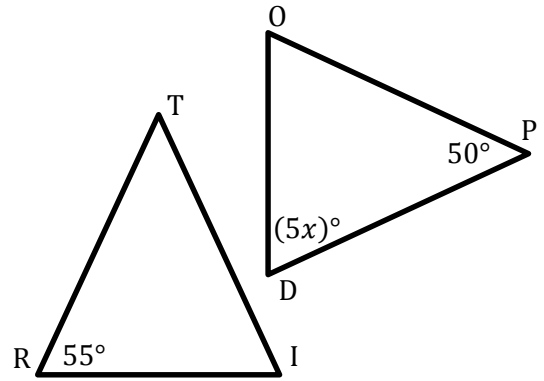
7. $\triangle TRI \cong \triangle POD$

Equation: _____

$x =$ _____

$m\angle O =$ _____

$m\angle D =$ _____



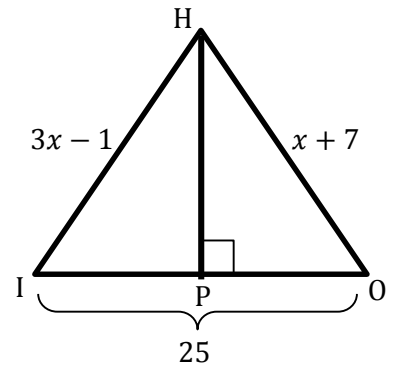
8. $\triangle HIP \cong \triangle HOP$

Equation: _____

$x =$ _____

$m\angle HPI =$ _____

$HI =$ _____



9. $\triangle ABC \cong \triangle DEF$

$AB = 15$

$BC = 20$

$AC = 25$

$FE = 3x - 7$

Draw a picture!

Equation: _____

$x =$ _____

10. $\triangle ABC \cong \triangle DEF$

$DE = 10$

$EF = 13$

$DF = 16$

$AC = 4x - 8$

Draw a picture!

Equation: _____

$x =$ _____

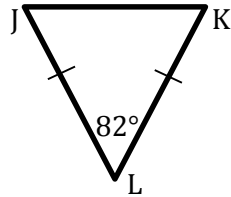
11. Draw isosceles $\triangle JKL$ with $\angle K$ as the vertex angle. Name the legs, base, and base angles of the triangle.

Legs: _____

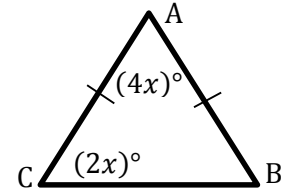
Base: _____

Base Angles: _____

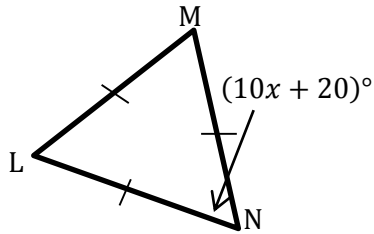
12. $m\angle K =$ _____



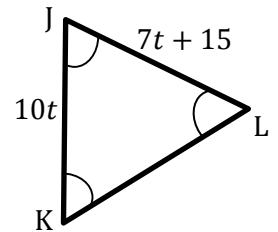
13. $m\angle A =$ _____



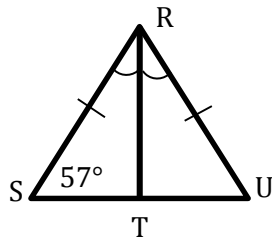
14. $x =$ _____



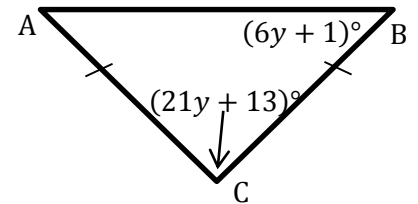
15. $JK =$ _____



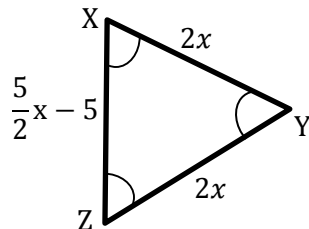
16. $m\angle TRU =$ _____



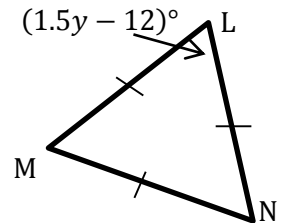
17. $m\angle A =$ _____



18. $XZ =$ _____



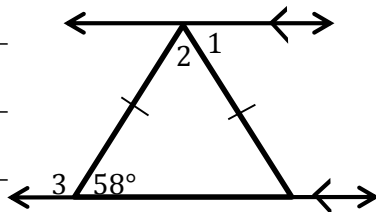
19. $y =$ _____



20. $m\angle 1 =$ _____

$m\angle 2 =$ _____

$m\angle 3 =$ _____



21. $m\angle 1 =$ _____

$m\angle 2 =$ _____

$m\angle 3 =$ _____

