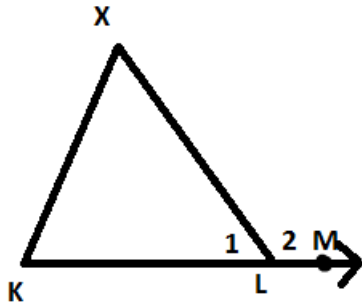


Name: _____
 Date: _____
 Class: _____

Geometry
 Unit 3
 HW 3-4

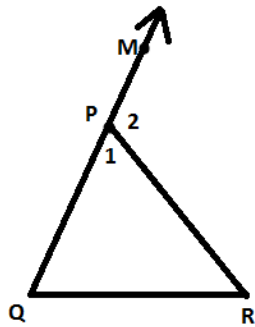


1) In the diagram if $m\angle 2 = 12x - 11$, $m\angle X = 6x - 4$, and $m\angle K = 5x + 3$ find and explain $m\angle 1$.

2) In the diagram if $m\angle 2 = x^2 + 2x + 2$, $m\angle X = 6x - 2$, $m\angle K = 8x - 16$ find $m\angle 1$.

3) In the diagram if $m\angle 1 = 40$, $m\angle K = x - 7$, and $m\angle X = 5x - 3$, which is the longest side of triangle XLK? How do you know?

5)



If $\triangle PQR$ is isosceles ($\angle P$ is the vertex \angle) and $m\angle 2 = 130^\circ$
 Find $m\angle Q$

6) Using the diagram for #5 if $\triangle PQR$ is isosceles and \overline{QR} is the base find $m\angle 1$ if $m\angle 2 = 6x + 38$ and $m\angle R = 5x - 9$.

7) If $\triangle AKV$ is equilateral and the perimeter is 36 feet find x if $a = 5x - 13$.

8) In a right triangle the side opposite from a 42° angle is 17 feet long. Find the other two side lengths of this triangle to the nearest tenth of a degree.

9) If a ship is 420 feet from the base of a cliff which is 202 feet tall. What is the angle of elevation from the ship to the top of the cliff?

10) If an isosceles triangle has two base angle represented by $4x - 4$ and $2x + 15$ find and explain the measure of the vertex angle of this triangle.