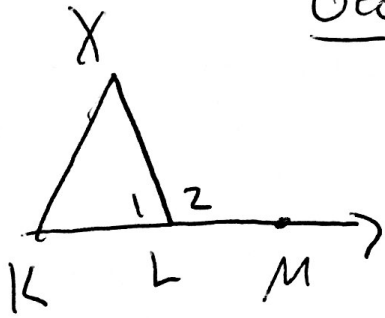


Geo HW 3-4 Ans



$$12x - 11 = 6x - 4 + 5x + 3 \quad (\text{ext } \angle \text{ of } \triangle = 2 \text{ remote int})$$

$$12x - 11 = 11x - 1$$

$$x = 10$$

$$m\angle 2 = 12(10) - 11 = 109^\circ$$

$$180 - 109 = 71^\circ = m\angle 1$$

$\angle 2, \angle 1$ supp
b/c lin pair

2

$$x^2 + 2x + 2 = 6x - 2 + 8x - 16 \quad (\text{ext } \angle \text{ of } \triangle = 2 \text{ remote int})$$

$$x^2 + 2x + 2 = 14x - 18$$

$$x^2 - 12x + 20 = 0$$

$$(x - 2)(x - 10) = 0$$

$$x = 2 \text{ or } x = 10$$

$$m\angle 2 = 2^2 + 2(2) + 2 = 10^\circ$$

or

$$m\angle 2 = 10^2 + 2(10) + 2 = 122^\circ$$

$$180 - 122 = 58^\circ = m\angle 1 \quad (\angle 2, \angle 1 \text{ lin pair, supp})$$

3

$$40 + x - 7 + 5x - 3 = 180 \quad (3 \text{ int } \angle \text{ s } \triangle = 180)$$

$$6x + 30 = 180$$

$$6x = 150$$

$$x = 25$$

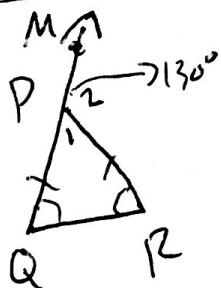
$$25 - 7 = 18^\circ = m\angle K$$

$$5(25) - 3 = 122^\circ = m\angle X$$

$$40^\circ = m\angle I$$

\overline{KL} is largest
b/c it's across from
largest \angle

4



$$\frac{130}{2} = 65^\circ = m\angle Q$$

ext $\angle =$ sum remote int and remote int are
 \cong b/c isos \triangle has \cong base \angle s

5

$$6x + 38 = 2(5x - 9)$$

$$6x + 38 = 10x - 18$$

$$56 = 4x$$

$$x = 14$$

(base \angle s of isos $\triangle \cong$ and ext $\angle =$ remote int)

$$m\angle 2 = 6(14) + 38 = 122$$

$$180 - 122 = 58^\circ = m\angle 1$$

$(\angle 1, \angle 2 \text{ lin pair, supp})$

7



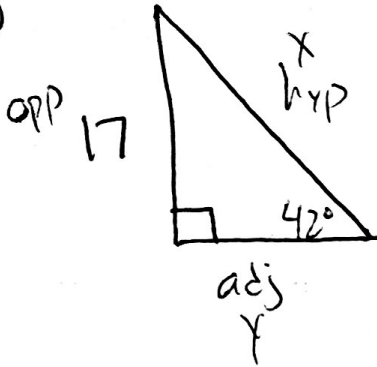
$\frac{36}{3} = 12$ each side (all sides \cong in equil Δ)

$$5x - 13 = 12$$

$$5x = 25$$

$$x = 5$$

8



$$\sin(42^\circ) = \frac{17}{x}$$

$$\tan 42 = \frac{17}{y}$$

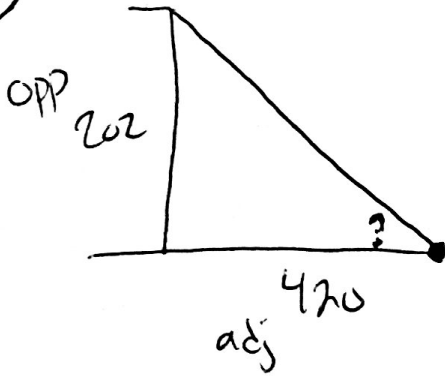
$$x = \frac{17}{\sin 42}$$

$$y = \frac{17}{\tan 42}$$

$$x = 25.4$$

$$y = 18.9$$

9



$$\tan ? = \frac{202}{420}$$

$$\boxed{2nd} \boxed{\tan} (202/420)$$

$$? = 25.7^\circ$$

10



(base \angle s isos $\Delta \cong$)

$$4x - 4 = 2x + 15$$

$$2(9.5) + 15 = 34^\circ$$

$$2x = 19$$

each base \angle 34°

$$x = 9.5$$

$$34 + 34 = 68^\circ$$

$$180 - 68^\circ = 112^\circ = \text{vertex}$$

3 \angle s of Δ total 180°