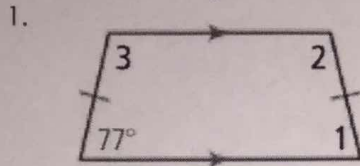


Homework 6.4: Quadrilaterals

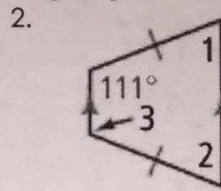
Name: _____

Math 3

Directions: For questions #1-2, find the measure of each missing angle.

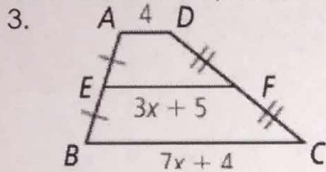


$$\begin{aligned} m\angle 1 &= 77^\circ \\ m\angle 2 &= 103^\circ \\ m\angle 3 &= 103^\circ \end{aligned}$$

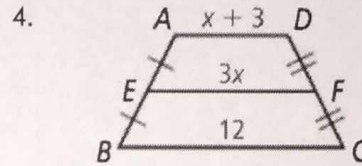


$$\begin{aligned} m\angle 1 &= 69^\circ \\ m\angle 2 &= 69^\circ \\ m\angle 3 &= 111^\circ \end{aligned}$$

Directions: For questions #3-4, find x and the length of EF .

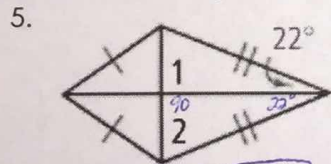


$$\begin{aligned} 3x + 5 &= \frac{1}{2}(4 + 7x + 4) \\ 3x + 5 &= 3.5x + 4 \\ 1 &= .5x \\ \boxed{x = 2} & \quad \boxed{EF = 3(2) + 5 = 11} \end{aligned}$$

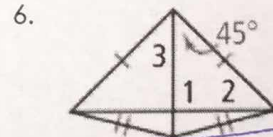


$$\begin{aligned} 3x &= \frac{1}{2}(12 + x + 3) \\ 3x &= \frac{x}{2} + \frac{15}{2} \\ 2.5x &= 7.5 \\ \boxed{x = 3} & \quad \boxed{EF = 3(3) = 9} \end{aligned}$$

Directions: For questions #5-6, find the measures of the numbered angles in each kite.



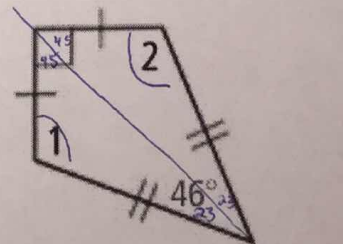
$$\begin{aligned} m\angle 1 &= 90^\circ \\ m\angle 2 &= 68^\circ \end{aligned}$$



$$\begin{aligned} m\angle 1 &= 90^\circ \\ m\angle 2 &= 45^\circ \\ m\angle 3 &= 45^\circ \end{aligned}$$

Challenge Question: Solve for the unknown angle measures in the kite shown below.

$$m\angle 1 = m\angle 2 = \cancel{112} \quad 112^\circ$$



$$\begin{array}{r} 45 \\ + 23 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 180 \\ - 68 \\ \hline 112 \end{array}$$

$$\begin{array}{r} 112 \\ 45 \\ 23 \\ \hline 180 \end{array}$$

$$\cancel{112} \quad 112^\circ \checkmark$$