

# Finding Angles in Polygons

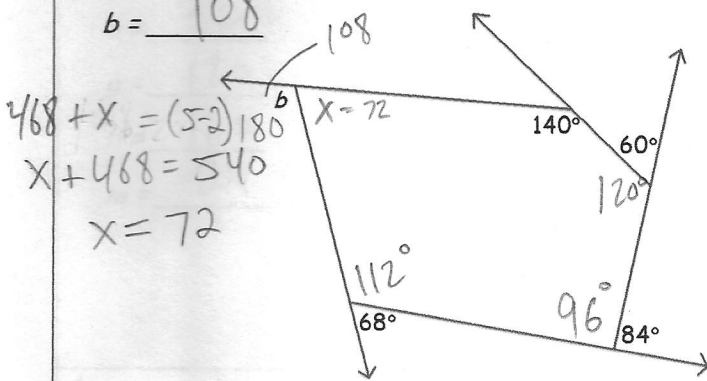
Name \_\_\_\_\_

Date \_\_\_\_\_ Pd \_\_\_\_\_

Using what you know about angles in triangles and polygons, parallel lines, and other angle relationships, find the missing angles in each of the following problems or answer the question related to the picture shown.

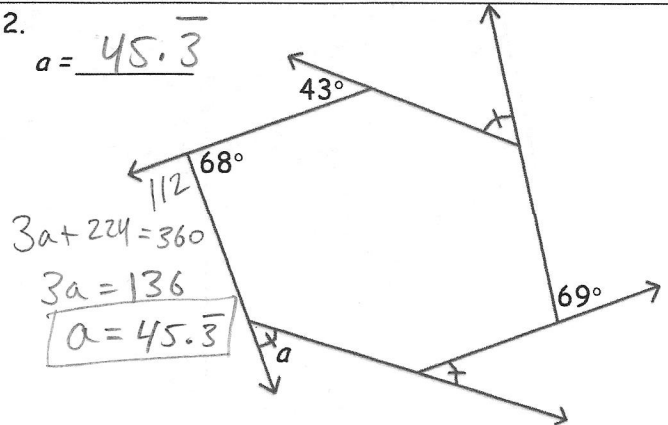
1.

$b = 108$



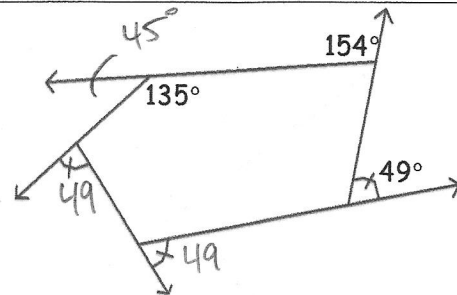
2.

$a = 45.3$



3. What is wrong with this picture?

The exterior  $\angle$ s don't add up to  $360^\circ$  like they should according to Polygon Exterior  $\angle$  Theorem.



4.

$m = 99$

$n = 82$

$p = 118$

$q = 136$

$r = 99$

$s = 64$

$t = 88$

$u = 116$

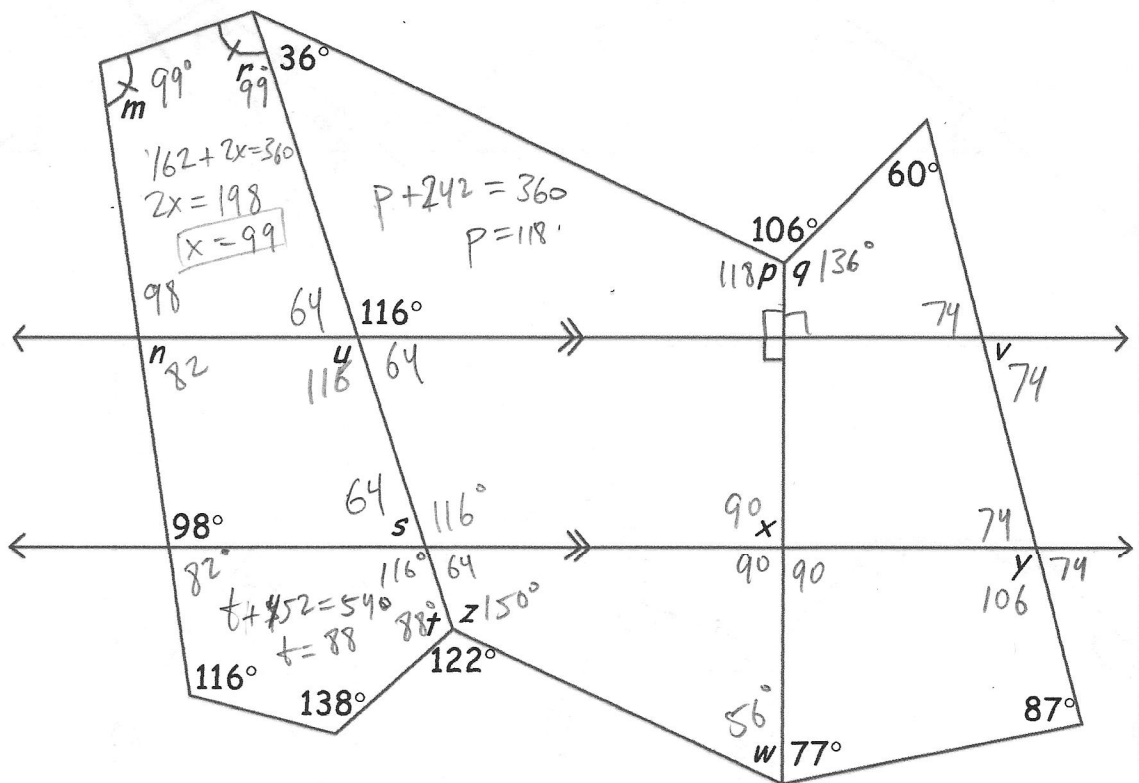
$v = 74$

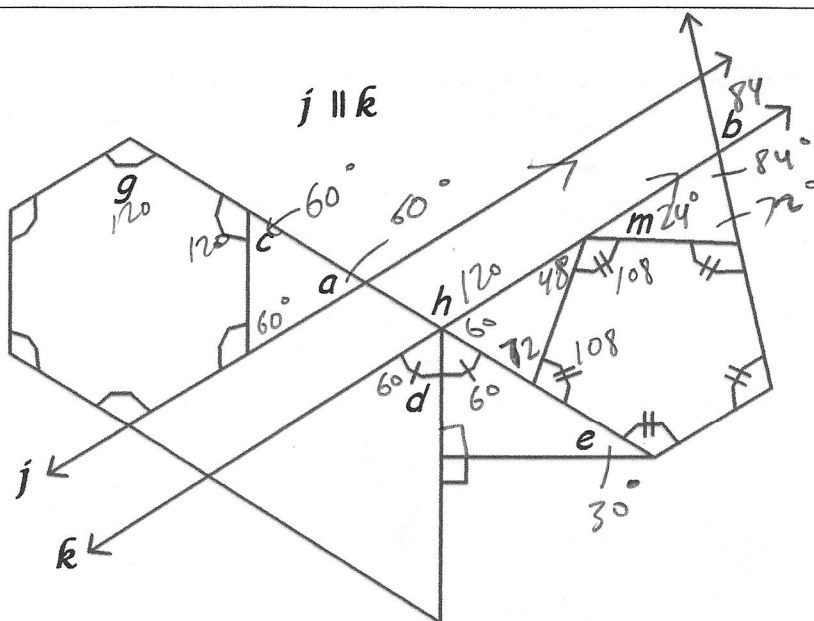
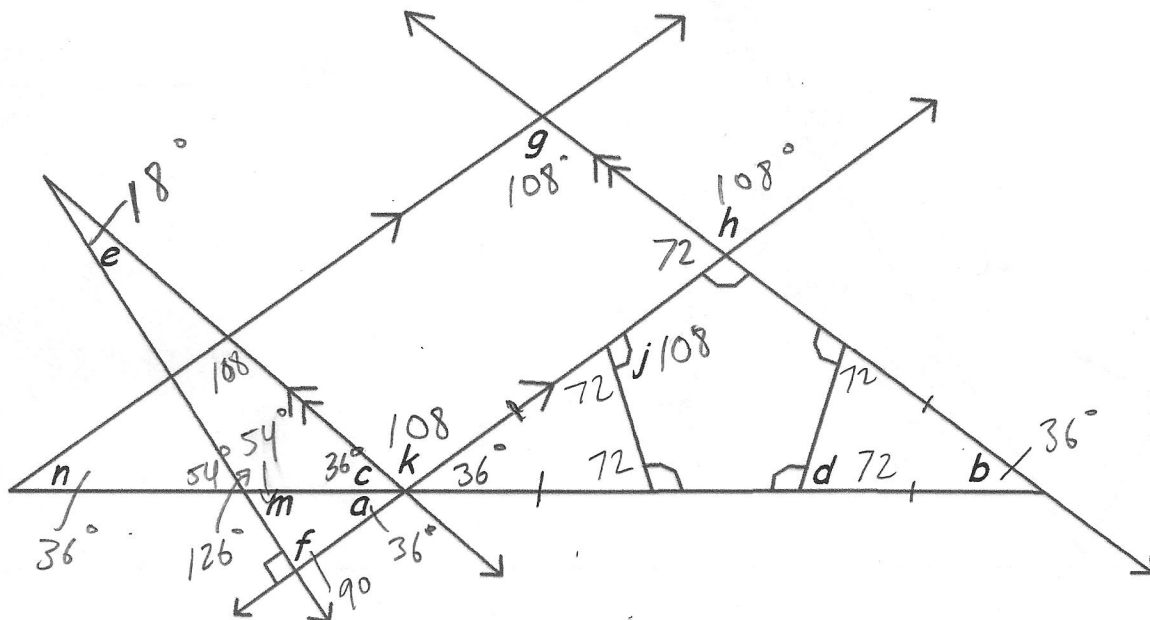
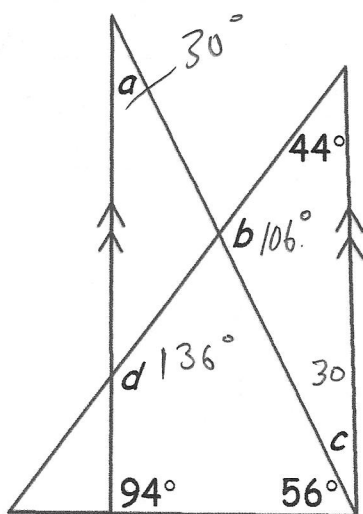
$w = 56$

$x = 90$

$y = 106$

$z = 150$



$$\begin{aligned} a &= 60 \\ b &= 84 \\ c &= 60 \\ d &= 60 \\ e &= 30 \\ g &= 120 \\ h &= 120 \\ m &= 24 \end{aligned}$$

$$\begin{aligned} a &= 36 \\ b &= 36 \\ c &= 36 \\ d &= 72 \\ e &= 18 \\ f &= 90 \\ g &= 108 \\ h &= 108 \\ j &= 108 \\ k &= 108 \\ m &= 54 \\ n &= 36 \end{aligned}$$

$$\begin{array}{r} a = 30 \\ b = 106 \\ c = 30 \\ d = 136 \end{array}$$

$$\begin{array}{r} a = 72 \\ c = 126 \\ m = 45 \\ n = 117 \end{array}$$
