

① Classify $\angle 6$ and $\angle 7$.

vertical angles

② Find $m\angle 3$ if $m\angle 4 = 68^\circ$

$$180 - 68 = 112^\circ$$

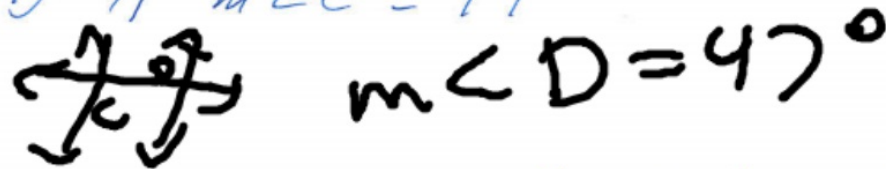
③ Find $m\angle 2$ if $m\angle 6 = 38^\circ$

$$m\angle 2 = 38^\circ$$

$\angle 3$

$$\angle 3 + \angle 4 = 180$$

- ④ $\angle C$ and $\angle D$ are alternate interior angles formed by two parallel lines cut by a transversal. Find $m\angle D$ if $m\angle C = 47^\circ$



- ⑤ $\angle 1$ and $\angle 2$ are corresponding and supplementary angles formed by two parallel lines cut by a transversal. Find $m\angle 1$.



- ⑥ Find the third angle of a right triangle if the measure of one angle is 46° .

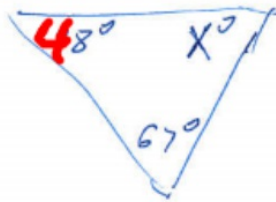
$$90^\circ + 46^\circ + x^\circ = 180^\circ$$

$$136 + x = 180$$

$$x = 44^\circ$$



- ⑦ Find the value of x in the triangle



$$48 + 67 + x = 180^\circ$$

$$115 + x = 180^\circ$$

$$x = 65^\circ$$

- ⑧ Find the measure of an exterior angle of the regular polygon shown below.



6 sides

Hexagon

~~14~~
⑨ The measure of the exterior angle of a regular polygon is 36 degrees. How many sides does the polygon have?

$$36x = 360 \quad x = 10$$

10-sided
deca-
gon