① Classify ∠6 and ∠7.

vertical angles

② Find m∠3 if m∠4 = 68°

$$180 - 68 = 112°$$

∠8 → ∠3 + ∠4 = 180

③ Find m∠2 if m∠6 = 38°

$$m∠2 = 38°$$

④ ∠C and ∠D are alternate interior angles formed by two parallel lines cut by a transversal. Find m∠D if m∠C = 47°

m∠D = 47°

⑤ ∠1 and ∠2 are corresponding and supplementary angles formed by two parallel lines cut by a transversal. Find m∠1.

m∠1 = 90°

$x = 44°$
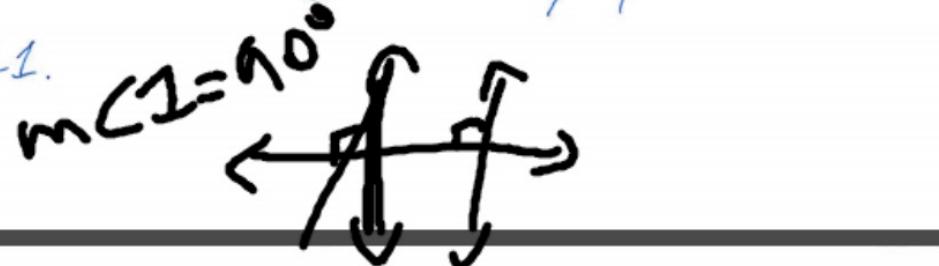
⑥ Find the third angle of a right Triangle
if the measure of one angle is 46°.

$90° + 46° + x° = 180°$?
$136 + x = 180$ $90°$ 46°

⑦ Find the value of x in the triangle

48°   x°
      67°
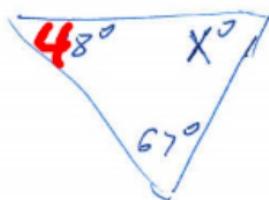
$48 + 67 + x = 180°$
$115 + x = 180°$
$x = 65°$

⑧ Find the measure of an exterior angle of
the regular polygon shown below.
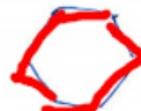
6 Sides   Hexagon

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

$$36x = 360 \qquad x = 10$$

10-sided

deca-

gon