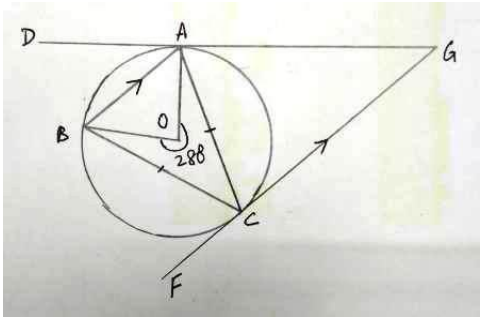
Answers:

(1)



(a) Obtuse $\angle AOB = 360° - 280°$

$= 80°$

$\therefore \ \angle ACB = \frac{1}{2}\angle AOB$ (∠ at centre = twice ∠ at circum.)

$= \frac{1}{2}(80°)$

$= 40°$

(b) $\angle BAC = \angle ABC \ (AC = BC)$

$\therefore \ \angle BAC = \frac{1}{2}(180° - 40°)$

$= 70°$

$\angle BAO = \angle ABO \ (OA \ and \ OB \ are \ radii)$

$\therefore \ \angle BAO = \frac{1}{2}(180° - 80°)$

$= 50°$

$\therefore \ \angle OAC = \angle BAC - \angle BAO$

$= 70° - 50°$

$= 20°$

(c) $\angle OAG = 90°$ (radius ⊥ tangent)

$\therefore \ \angle GAC = 90° - \angle OAC$

$= 90° - 20°$

$= 70°$

$\angle GAC = \angle GCA \ (AG = CG = tangents)$

$\therefore \ \angle AGC = 180° - (70° + 70°)$

$= 40°$