Fixed Axis Rotation Example Problem 1

Two gears A and B touch with no slip. Gear A starts from rest with $\alpha_A = 2\theta_A \text{ rad/sec}^2$. When gear A has rotated 2.2 revolutions, please determine the magnitude of the acceleration of point P.

$\alpha_A = 2\theta_A \text{ rad/sec}^2$

$r_A = 50 \text{ mm}$

$r_B = 100 \text{ mm}$

$a_p = ?$
\[ \alpha_A = 27.65 \text{ rad/s}^2 \]
\[ \omega_A = 19.55 \text{ rad/s} \]

\[ \alpha_A = 2 \theta_A \text{ rad/sec}^2 \]

\[ r_A = 50 \text{ mm} \]
\[ r_B = 100 \text{ mm} \]