



Question 10

i).  $0 < \theta \leq \frac{\pi}{2}$

$r$  is half of the plate so:

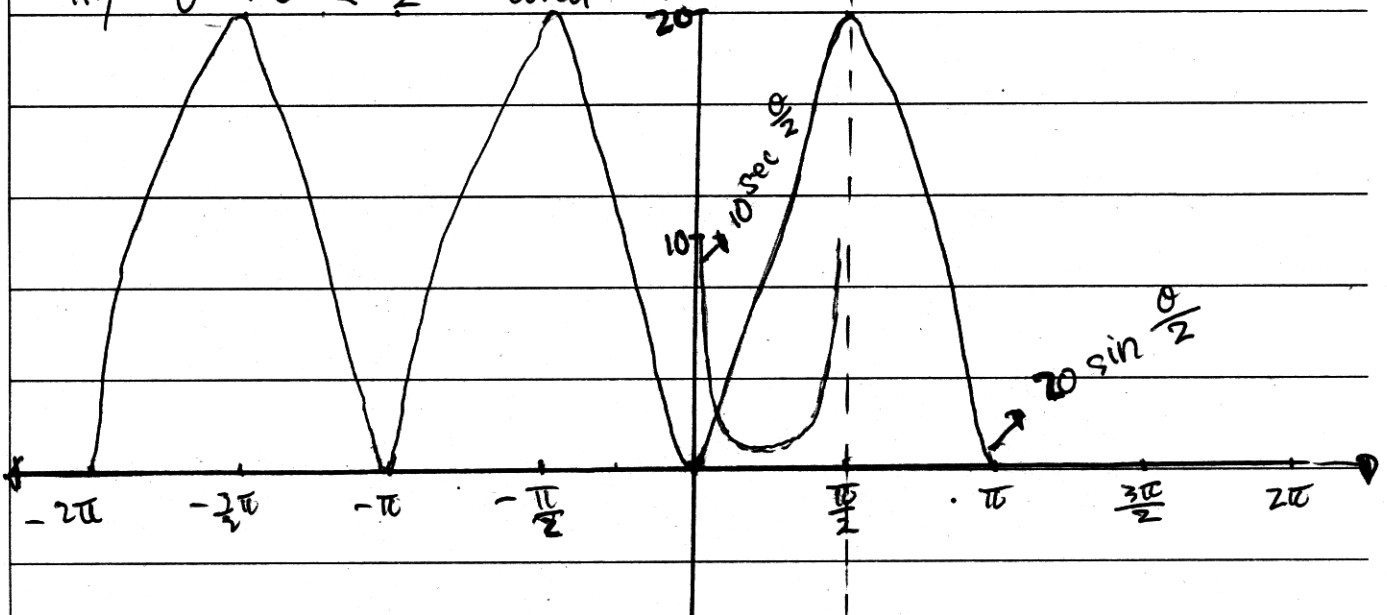
$$\therefore r = 10 \sec \frac{\theta}{2}$$

ii).  $\frac{\pi}{2} < \theta < \pi$

$r$  is diagonal lines through the plate so:

$$\therefore r = 20 \sin \frac{\theta}{2}$$

iii).  $0 < \theta \leq \frac{\pi}{2}$  and  $\frac{\pi}{2} < \theta < \pi$





(b. i).