

$$s = r\theta$$

$$A = \frac{1}{2}r^2\theta$$

$$\underline{2\pi}r = \theta r = r\theta$$

$$\pi r^2$$

$$= \frac{1}{2}(2\pi)r^2 = \frac{1}{2}\theta r^2 = \frac{1}{2}r^2\theta$$

$$\sin^2\theta + \cos^2\theta = 1$$

$$\tan^2\theta + 1 = \sec^2\theta$$

$$\cot^2\theta + 1 = \csc^2\theta$$

→ Allowed

High Point 70 @ $x=5$
 Low Point -3 @ $x=23$

Build it

$T=36$

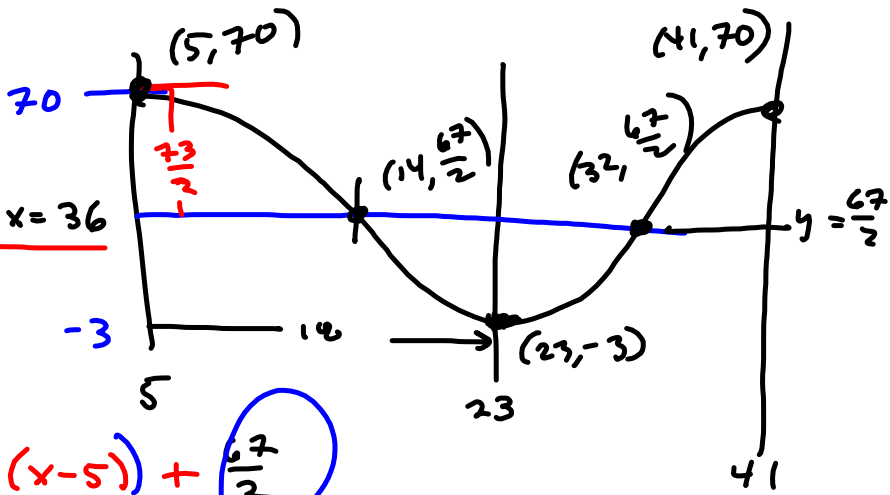
$bx = 2\pi$ when $x=36$

$36b = 2\pi$

$b = \frac{2\pi}{36} = \frac{\pi}{18}$

$\frac{73}{2} \cos\left(\frac{\pi}{18}(x-5)\right) + \frac{217}{2}$

$\frac{70 - (-3)}{2}$ High at 5. $\frac{70 + (-3)}{2}$



$$17 \sin\left(\frac{\pi}{3}x - \frac{7\pi}{3}\right) + 20$$

$$17 \sin\left(\frac{\pi}{3}(x-7)\right) + 20$$

↑ Amplitude ↑ starts at $x=7$ ↑ midline

When does $\frac{\pi}{3}x = 2\pi$?

$$x = \frac{2\pi}{\left(\frac{\pi}{3}\right)} = (2\pi) \left(\frac{3}{\pi}\right) = \boxed{6 = T}$$

