

67 Refer to the solution for exercise 53.

(a) Plot the data in $[0, 25, 2]$ by $[60, 90, 5]$. See *Figure 67a*.

(b) $a = 0.5(85 - 72) = 6.5$, $b = \frac{\pi}{6}$, $c = 4$, $d = 0.5(85 + 72) = 78.5$. Thus $y = 6.5 \sin\left(\frac{\pi}{6}(x - 4)\right) + 78.5$.

(c) See *Figure 67b*. Note: a phase shift with $4 < c < 5$ may fit the data slightly better.

$[0, 25, 2]$ by $[60, 90, 5]$

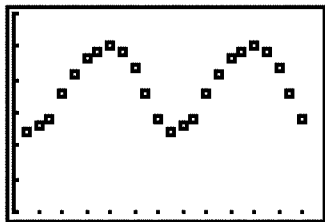


Figure 67a

$[0, 25, 2]$ by $[60, 90, 5]$

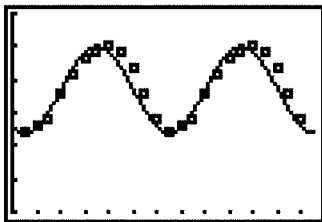


Figure 67b