

ERRATA
SMARTPREP and Haese Mathematics
Mathematics SL Flash Cards

First edition - 2017 initial print

The following errata were made on 03/Apr/2018

card 57 **TOPIC 3** should read:



Find the angles that the lines $y = \frac{3}{4}x + 1$ and $y = -x - 1$ make with the positive x -axis.

Hence find the acute angle between the lines.

- a** The principal axis is half way between the maximum and minimum temperatures.

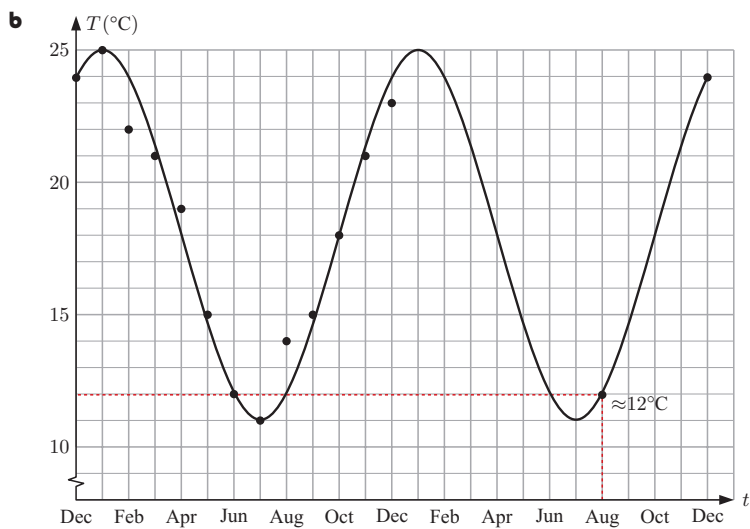
$$\therefore d = \frac{25 + 11}{2} = 18$$

$$\text{The amplitude} = \frac{\text{max} - \text{min}}{2} = \frac{25 - 11}{2} = 7 \quad \therefore a = 7.$$

$$\text{The period is 12 months} \quad \therefore \frac{2\pi}{b} = 12 \quad \therefore b = \frac{\pi}{6}$$

At $t = 10$, the graph rises across the principal axis $\therefore c = 10$.

So, the data can be modelled by $T \approx 7 \sin\left(\frac{\pi}{6}(t - 10)\right) + 18$ degrees Celsius.



- c** We predict the mean temperature for the following August to be about 12°C .