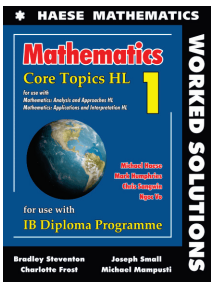

ERRATA

Mathematics: Core Topics HL

WORKED SOLUTIONS

First edition - 2019

The following erratum was made on 27/May/2020

page 359 **EXERCISE 8F** Question **5 b**, should be:

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

$\therefore \sin^2\theta + \left(\frac{3}{10}\right)^2 = 1$

$\therefore \sin^2\theta + \frac{9}{100} = 1$

$\therefore \sin^2\theta = \frac{91}{100}$

$\therefore \sin\theta = \pm\frac{\sqrt{91}}{10}$

$\theta \approx 1.27$ corresponds to the first quadrant, where $\sin\theta$ is positive.

So, for $\theta \approx 1.27$, $\sin\theta = \frac{\sqrt{91}}{10}$,

$\tan\theta = \dfrac{\frac{\sqrt{91}}{10}}{\frac{3}{10}} = \frac{\sqrt{91}}{3}$.

$\theta \approx 5.02$ corresponds to the fourth quadrant, where $\sin\theta$ is negative.

So, for $\theta \approx 5.02$, $\sin\theta = -\frac{\sqrt{91}}{10}$,

$\tan\theta = \dfrac{-\frac{\sqrt{91}}{10}}{\frac{3}{10}} = -\frac{\sqrt{91}}{3}$.

The following erratum was made on 28/Apr/2020

page 728 **EXERCISE 15F** Question **20**, first line should read:

20 Let $f(x) = \dfrac{ax+b}{cx+d}$, $c \neq 0$

The following erratum was made on 26/Mar/2020

page 834 **EXERCISE 17G.3** Question **13 d**, should read:

13 d $y = 5\cos\left(b\left(x - \frac{\pi}{4}\right)\right) + d$

When $x = \frac{\pi}{4}$, $y = 1$

$\therefore 1 = 5\cos(b \times 0) + d$

$\therefore d = -4$

When $x = \frac{13\pi}{4}$, $y = -4$

$\therefore -4 = 5\cos(b \times 3\pi) - 4$

$\therefore \cos 3b\pi = 0$

$\therefore 3b\pi = \frac{\pi}{2}, \frac{3\pi}{2}, \frac{5\pi}{2}, \frac{7\pi}{2}, \ldots$

$\therefore b = \frac{1}{6}, \frac{1}{2}, \frac{5}{6}, \frac{7}{6}, \ldots$