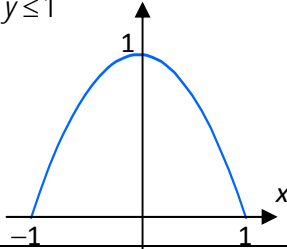
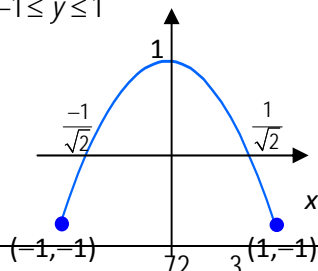


## Errata in Fundamental Maths (1<sup>st</sup> edition)

Page	Column	Line	Error	Correction
63	1	11, 13	$0 \leq x \leq 2.2$	$1 \leq x \leq 2.2$
68	2	7	$\frac{3\sqrt[3]{4x^2+3}}{4}$	$\frac{3\sqrt{4x^2+3}}{4}$
150		3,4	$\therefore \frac{\tan 80^\circ}{\tan 50^\circ} = \frac{AC}{BC} = \frac{2 \text{ minutes}}{BC}$ $\therefore BC = \frac{\tan 50^\circ}{\tan 80^\circ} \times 2 = 0.42 \text{ minutes} = 25 \text{ seconds.}$	$\therefore \frac{\tan 80^\circ}{\tan 50^\circ} = \frac{AC}{BC} = \frac{2+BC}{BC} \therefore \frac{2+BC}{BC} = 4.759.$ $\therefore BC = \frac{2}{3.759} = 0.53 \text{ minutes} = 31 \text{ seconds.}$
189	1	28	sector	segment
190	1	5	(a) $\int_0^1 \frac{1}{\sqrt{4-x^2}} dx$	(a) $\int_1^{\sqrt{3}} \frac{1}{\sqrt{4-x^2}} dx$
191	2	13	(d) $\int \frac{1}{\sqrt{8-12x-4x^2}} dx$	(d) $\int \frac{1}{\sqrt{8-12x-4x^2}} dx$
202	1	4	$\sin^{-1} \frac{1}{4}$	$\sin^{-1} \frac{3}{4}$
206	1	5	Range: $0 \leq y \leq \pi$ . (and its diagram)	Range: $0 \leq y \leq \frac{\pi}{2}$ .
207	2	12	Domain: $-1 \leq x \leq 1$	Domain: $-1 < x < 1$
208	1	9	Range: $0 \leq y \leq 1$ 	Range: $-1 \leq y \leq 1$ 
259	1	3 <sup>rd</sup> from last	$\frac{72}{120} = \frac{3}{8}$	$\frac{72}{192} = \frac{3}{8}$
261	1	20,21	${}^3C_1 {}^2C_1 \frac{5!}{2!3!} + {}^3C_3 \frac{6!}{2!2!2!} = 3 + 126 + 60 + 90 + 60 + 90 = 429$	${}^3C_1 {}^2C_1 \frac{6!}{2!3!} + {}^3C_3 \frac{6!}{2!2!2!} = 3 + 36 + 90 + 60 + 90 + 360 + 90 = 729 = 3^6$
261	1	26	$\frac{{}^{10}C_4 {}^{20}C_1 + {}^{10}C_5}{{}^{30}C_5} = \frac{106}{3393}$	$\frac{{}^3C_1 {}^{10}C_4 {}^{20}C_1 + {}^3C_1 {}^{10}C_5}{{}^{30}C_5} = \frac{106}{1131}$
261	2	16, 17	Yvette's group can then be seated in $3!$ ways, Xuan's group in $4!$ ways. $\therefore$ Total = $2 \times 3! \times 4! \times 6! \times 7!$ . $\therefore \text{Pr} = \frac{2 \times 3! \times 4! \times 6! \times 7!}{3! \times 4! \times 5! \times 6! \times 7!} = \frac{2}{5!} = \frac{1}{60}$ .	Yvette's group can then be seated in $3!$ ways, Xuan's group in $4!$ ways and the next 2 groups can be swapped. $\therefore$ Total = $2 \times 3! \times 4! \times 6! \times 7! \times 2$ . $\therefore \text{Pr} = \frac{2 \times 3! \times 4! \times 6! \times 7! \times 2}{3! \times 4! \times 5! \times 6! \times 7!} = \frac{4}{5!} = \frac{1}{30}$ .
269	1	15	$\frac{1}{r+1} \sum_{r=0}^n C_r$	$\sum_{r=0}^n \frac{C_r}{r+1}$
270	1	4	$\frac{1}{r+1} \sum_{r=0}^n C_r$	$\sum_{r=0}^n \frac{C_r}{r+1}$
271	4	4	(i) $\sum_{r=1}^n r C_r 2^{2n-2}$	(i) $\sum_{r=1}^n r C_r 2^{2r-2}$

279	1	14 to 17	$= a^{n+1} + b^{n+1} + \sum_{r=1}^n {}^n C_r a^{n+1-r} b^r + \sum_{r=1}^n {}^n C_{r+1} a^{n+1-r} b^r$ $= a^{n+1} + b^{n+1} + \sum_{r=1}^n ({}^n C_r + {}^n C_{r+1}) a^{n+1-r} b^r$ $= a^{n+1} + b^{n+1} + \sum_{r=1}^n {}^{n+1} C_{r+1} a^{n+1-r} b^r, \text{ from Q3}$ $= \sum_{r=0}^{n+1} {}^{n+1} C_{r+1} a^{n+1-r} b^r.$	$= a^{n+1} + b^{n+1} + \sum_{r=1}^n {}^n C_r a^{n+1-r} b^r + \sum_{r=1}^n {}^n C_{r-1} a^{n+1-r} b^r$ $= a^{n+1} + b^{n+1} + \sum_{r=1}^n ({}^n C_r + {}^n C_{r-1}) a^{n+1-r} b^r$ $= a^{n+1} + b^{n+1} + \sum_{r=1}^n {}^{n+1} C_r a^{n+1-r} b^r, \text{ from Q3}$ $= \sum_{r=0}^{n+1} {}^{n+1} C_r a^{n+1-r} b^r.$
290	3	11	${}^{20}C_n + {}^{20}C_{n+1} = {}^{n+1}C_{n+1}$	${}^{20}C_n + {}^{20}C_{n+1} = {}^{21}C_{n+1}$
293	1	25	4000 cosec $\theta$	cosec $\theta$
298	1	4 <sup>th</sup> from last	the particle is at the origin	the particle is at rest at the origin
324	1	2	0.002	- 0.002
325	2	4 <sup>th</sup> from last	m/s <sup>2</sup>	m/s
325	2	diagram		
326	1	1st	m/s <sup>2</sup>	m/s
329	1	6 <sup>th</sup> from last	$t = 4 \text{ s}$	Although it momentarily stops when $t = 4$ , the particle continues to move to the right. It's furthest at $t = 5 \text{ s}$ .
332	2	23 24	$v^2 = \frac{4.1 \times 10^{14}}{x} - 4.6 \times 10^7.$ $\therefore x = \frac{4.1 \times 10^{14}}{v^2 + 4.6 \times 10^7}.$	$v^2 = \frac{8.2 \times 10^{14}}{x} - 9.2 \times 10^7.$ $\therefore x = \frac{8.2 \times 10^{14}}{v^2 + 9.2 \times 10^7}.$
335	1	last	$a = -n\alpha = -\frac{\pi}{4} \times 3 = -\frac{3\pi}{4}$	$a = -n^2 \alpha = -\frac{\pi^2}{16} \times 3 = -\frac{3\pi^2}{16}$
342	1	6	horizontal range = $\frac{V^2}{2g}$	horizontal range $R = 2x_{\max} = \frac{V^2}{g}$
342	1	17	$\therefore$ Its max. range is $\frac{\sqrt{2gh(V^2 - 2gh)}}{g}$ if $h < \frac{V^2}{4g}$ or $\frac{V^2}{2g}$ if $h \geq \frac{V^2}{4g}$ .	$\therefore$ Its max. range $R = \frac{2\sqrt{2gh(V^2 - 2gh)}}{g}$ if $h < \frac{V^2}{4g}$ or $\frac{V^2}{g}$ if $h \geq \frac{V^2}{4g}$ .
395	2	Q1, part n	Missing the right-angled sign at B	Add a right angle sign to $\angle B$ .
402	2	4 <sup>th</sup> from last Last	$\angle EFC = 80^\circ$ $\circ = 180^\circ - 80^\circ = 100^\circ$	$\angle EFC = 100^\circ$ $\circ = 180^\circ - 100^\circ = 80^\circ$