

# Textbook Corrections for McGraw-Hill Ryerson Advanced Functions

Chapter 1																										
Location	Question	What a mistake is / Correct Answer																								
Prerequisite Skills – p. 2	#7 b)	vertex(3, 0) and answer: $y = -\frac{1}{2}(x-3)^2$																								
Section 1.1 – p.12	#3d)	The leading coefficient is positive! (book says negative)																								
Section 1.2 - p.26	#2 d)	the columns for local max/min should be interchanged.																								
Section 1.2 - p.29	#18	a) part i) should be $S(r) = 8\pi r^2$ b) S(r) is quadratic, not cubic!																								
Section 1.3 - p.34	Example 2 a)	the diagram should be labelled $y = (x-1)(x+2)(x+3)$ not $y = (x-1)^2(...)$																								
Section 1.3 – p.40	# 6 a)	To get the book answer we need the point on the y-axis to be (0, 72)																								
Section 1.3 – p.40	#6 c)	$f(x) = -3(x+2)^2(x-1)^2$ , the leading coefficient is not (-2).																								
Section 1.4 – p.47	Highlighted box summary on the top of the page.	It should not say that for even n, the functions $y = a[k(x-d)]^n + c$ are even. <b>Those functions are not even!</b> This can be verified by comparing f(-x) with f(x).																								
Section 1.4 – p.49	#1b	<p>The table in the book is wrong!</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><math>y = x^4</math></th> <th><math>y = (3x)^4</math></th> <th><math>y = 4(3x)^4</math></th> <th><math>y = 4[3(x+2)]^4 - 6</math></th> </tr> </thead> <tbody> <tr> <td>(-2, 16)</td> <td><math>(-\frac{2}{3}, 16)</math></td> <td><math>(-\frac{2}{3}, 64)</math></td> <td><math>(-2\frac{2}{3}, 58)</math></td> </tr> <tr> <td>(-1, 1)</td> <td><math>(-\frac{1}{3}, 1)</math></td> <td><math>(-\frac{1}{3}, 4)</math></td> <td><math>(-2\frac{1}{3}, -2)</math></td> </tr> <tr> <td>(0, 0)</td> <td>(0,0)</td> <td>(0,0)</td> <td>(-2,-6)</td> </tr> <tr> <td>(1, 1)</td> <td><math>(\frac{1}{3}, 1)</math></td> <td><math>(\frac{1}{3}, 4)</math></td> <td><math>(-1\frac{2}{3}, -2)</math></td> </tr> <tr> <td>(2, 16)</td> <td><math>(\frac{2}{3}, 16)</math></td> <td><math>(\frac{2}{3}, 64)</math></td> <td><math>(-1\frac{1}{3}, 58)</math></td> </tr> </tbody> </table>	$y = x^4$	$y = (3x)^4$	$y = 4(3x)^4$	$y = 4[3(x+2)]^4 - 6$	(-2, 16)	$(-\frac{2}{3}, 16)$	$(-\frac{2}{3}, 64)$	$(-2\frac{2}{3}, 58)$	(-1, 1)	$(-\frac{1}{3}, 1)$	$(-\frac{1}{3}, 4)$	$(-2\frac{1}{3}, -2)$	(0, 0)	(0,0)	(0,0)	(-2,-6)	(1, 1)	$(\frac{1}{3}, 1)$	$(\frac{1}{3}, 4)$	$(-1\frac{2}{3}, -2)$	(2, 16)	$(\frac{2}{3}, 16)$	$(\frac{2}{3}, 64)$	$(-1\frac{1}{3}, 58)$
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Section 1.4	#10(a) i)	$y = -x^4 + 3$ , not plus 2, range and vertex should be adjusted as well.																								
Section 1.4	#10 ii)	Should be $y \leq 3$																								
Section 1.5 – p.62	#7a)	Domain and range should be $r \in [0, 30]$ , $V \in [0, 36000\pi]$ $S \in [0, 3600\pi]$																								
Section 1.6	p.71 #3b	Answer should be “velocity is -2.4 m/s” (not “decreasing”)																								
Section 1.6	#13	The answer should be <b>positive</b> only! Change plus/minus to a plus.																								
Chapter 1 Review	p.74 #1c	$h(x) = 3x + 2x = 5x$ is also a polynomial function the way it appears so it should be listed as such. May be a negative or fractional exponent on a variable is missing.																								
Chapter 1 Review	p.76 #15 a)	Though it does not make an algebraic difference, <i>there should be a minus in front of a half!</i> (reflection in y-axis)																								
Chapter 2																										

Section 2.4	p.120 #11	Leading coefficient not reduced: should be $y = \frac{5}{2}(2x^3 - 3x^2 - 4x - 1)$
Section 2.4	p.120 #15	Correct answer but <i>not in proper factored form</i> .
Section 2.6	p.139 6b)	Answer should be a strict inequality: $x < -4$ or $-3 < x < -2$
Section 2.6	p.139 6d)	True for all x-values. The graph of f(x) is entirely above the x-axis.
Chapter 2 Review	p.140 -141	omit 10b, 11, 15, 16 – not factorable – need graphing utility
Section 2.2	p.103 #20 d) i)	$x^4 - 625 = (x^2 - 25)(x^2 + 25) = (x - 5)(x + 5)(x^2 + 25)$ . The (x + 5) factor is missing in the answer.
Chapter 3		
Section 3.2	p.165 #5 a)	Range is wrong. It should be $y > 0$ or $y \leq -\frac{1}{9}$
Section 3.2	p.165 #5 e)	Range is wrong. It should be $0 < y \leq \frac{1}{2}$ , with $\frac{1}{2}$ included!
Section 3.3	p.176 #18	The answer should be C, not A as the book says.
Section 3.4	p.184 #4f)	The answer is correct but number line answer is wrong.
Section 3.3	p.184 #5a)	There is a typo: denominator should be $x^2 - 6x + 5$ (6x is the middle term)
Chapter 4		
Section 4.3	p.225	#8 The answer should be <b>negative</b> : $-\frac{3\pi}{7}$
Section 4.3	p.227 #25	Possible answers are 0 and $\frac{\pi}{2}$
Chapter 4 Review	p.244 #11	Should be $\cos \frac{5\pi}{9} = -\sin y$ . The negative sign is missing in the book.
Chapter 5		
Section 5.1	p.259 #18	Use sine function. Assume vertical shift of zero, assume phase shift of zero. No Mistake: part b) graphing – Range should be $x \in [-0.6, 0.6]$ , <b>what the book gives is the parameters for a calculator window</b>
Section 5.4	p.288 #22	the equation should be $h = 10 \sin \frac{\pi}{15}(t - 7.5) + 12$ (wrong bracket)
Chapter 5 Review	p.300 #2	<b>correct answer should be</b> $\cos \left[ \frac{2}{3} \left( x - \frac{\pi}{3} \right) \right]$
Chapter 6		
Section 6.1	p.320 #11a), c)	The graph should be that of exponential function $y = 4^x$ , not $y = 4x$
Section 6.2	p.329 #15	(a) Use P = 1%, answer: more than 2.86 cm Textbook used P = 0.01 and their answer is: more than 5.72 cm (b) The book now uses P = 1.43% to get their answer. Inconsistent!
Section 6.3	p.339 #4b)	There is a problem with the graph: x-intercept should be 0.5, not 1.
Chapter 7		
Section 7.2	p.275 #3a)	The numerical answer is indeed roughly 35.75 in mg; to input into the calculator we need to raise 0.5 to exponent (1.5/3.1) and then multiply by 50 mg. Parts b) and c) are correct, for c) having a multiple of $A_0$ on

		both sides of equation allows for cancellation.
Section 7.2	p.376#14	The probability is not in percent. Use 0.2 instead of 20%.
Section 7.4	p.391 #3	The answers for d) and f) are switched.

Check – p.479 #2 c