

Pre-Calculus Error List

March 1, 2016

Errors in the current printing:

- Problem Set 1, Problem 12 – The bottom-leftmost point on the graph should be labeled “(-1, -3).” The error is on the solution and in the textbook.
- Problem Set 1, Problem 15 – The bottom-leftmost point on the graph should be labeled “(-2, -4).” The error is on the solution and in the textbook.
- Problem Set 1, Problem 19 – The graph for this problem should be viewed as having two points with the same x value. Each point does not have its own unique x value. This is an issue in the textbook and on the solution.
- Lesson 4, Page 29 – The x values are wrong for both tables in Table 4.1 They should be:

x	-3	-2	-1	0	1	2	3
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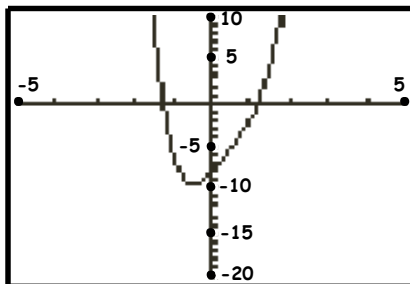
- Problem Set 5, Problem 12. On the solution, the explanation was cut short.
- Problem Set 6, Problem 5. On the CD, the answer for the x values should be:

x	-1	-0.5	-0.25	0	1	2
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- Problem set 7, Problem 20 – The answer in the answer key should be “A.”
- Problem Set 8, Practice E – The instructions for this problem should be changed to:
“Select the choice that best matches the inverse of the graph below. (Hint: Remember, the inverse of a function is exactly the same, except the x - and y -coordinates are switched.)”
- Problem Set 8, Problems 19 - 22 – The group instructions for these problems should be changed to:
“Select the choice that best matches the inverse of each graph below. (Hint: Remember, the inverse of a function is exactly the same, except the x - and y -coordinates are switched.)”
- Problem Set 8, Problem 19 – The answer in the answer key should be “C.” Also, the bottommost point labeled in the solution should be “(-3, -1).”
- Problem Set 12, Practice B – The answer in the answer key should be “B.”

- Problem Set 14, Practice F – The answer in the solution should be “at exactly 3 minutes and exactly 12 minutes.”
- Problem Set 14, Problem 23 – The answer in the solution should be “at exactly 10 minutes and exactly 20 minutes.”
- Problem Set 15, Problem 18 – Choice B in the textbook should be “ $y = x^3 + 4x^2 - 2x - 16$.”
- Problem Set 18, Problem 3 – The answer on the solution should be “True.” The problem statement on the solution should not include the phrase “of the coefficients.”
- Problem Set 24, Problem 19 – The graph in the solution is wrong because the calculator was not adjusted to the correct window size. The correct graph is choice “E” in the textbook.
- Problem Set 27, Problem 15. The answer in the answer key should be “E.”
- Lecture 28 – At one point in the CD lecture, the equation “ $4 = -x^2 - x - 6$ ” appears. The 6 should be positive, the equation should be “ $4 = -x^2 - x + 6$.”
- Lecture 28. The CD lecture was cut short. Look at the printed lesson for the content that is missing.
- Problem Set 30, Problem 21 – In the problem statement in the textbook and on the solution, “...is paying 9% interest once....” should be “is paying 9% annual interest once.....”
- Problem Set 34, Practice F – In the problem statement, “...a gravitational force of 16,000...” should be “...a gravitational force of 16,000 N...”
- Problem Set 34, Problem 20 – In the problem statement, “...a gravitational force of 18,000...” should be “...a gravitational force of 18,000 N...”
- Problem Set 35, Problem 22 – On the solution, the correct answer should be choice A, and choice C should be “ $f(x) = \begin{cases} 7.5 + 0.0904x, & x \leq 350 \\ 39.14 + 0.065x, & x > 350 \end{cases}$.”
- Problem Set 36, Practice F – In the problem statement on the solution, the equation should be “ $C = 0.10 \text{int}(t - 1) + 0.25$.”
- Lecture 38 – The CD lecture was cut short, but this lecture has been put on the Pre-Calculus page of our website under “Sample Lectures.”
- Problem Set 38, Practice E – The answer on the CD solution should be “235.165.”

- Problem Set 39, Problem 20 – The graph for this problem is inaccurate in the textbook and on the solution. It should be:



- Problem Set 46, Problem 10 – Choices C and D in the textbook and on the solution are both correct answers but only choice D is listed as correct in the answer key. Choice C should have said “ $y = 4 \cos\left(x - \frac{\pi}{2}\right)$.”

- Problem Set 51, Problem 8 – The answer on the CD solution is wrong, it should be

$$\alpha = 30^\circ + 180^\circ n$$

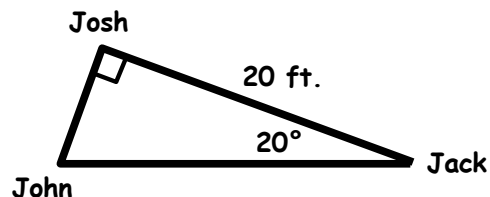
$$\alpha = 60^\circ + 180^\circ n$$

- Problem Set 60, Problem 9 – The answer in the solution is wrong because of rounding. It should be “ $\theta = 68.2$.”
- Problem Set 61, Problem 10 – In the problem statement, the last instance of the word “velocity” should be “speed.” Also, the top line of the instructions and problem statement should be, “Add the two velocities below to find the resultant speed.”
- Problem Set 61, Problem 16 – The graph for this problem needs arrows at the top end of both sides of the curve.
- Problem Set 63, Problem 22 – The last sentence of the problem statement should read, “...reached its maximum height after traveling horizontally 25 feet, what...” It must be clarified that the relevant distance is along the x -axis and not along the trajectory.
- Problem Set 65, Problem 6 – The answer on the solution is wrong, it should be “4,178.3.”

- Problem Set 69, Practice A – The solution cuts off halfway. “ $N_y = \begin{vmatrix} 6 & 14 & -2 \\ -4 & -4 & 5 \\ 5 & 10 & -6 \end{vmatrix} = -102,$ ”

$$N_z = \begin{vmatrix} 6 & 4 & 14 \\ -4 & -2 & -4 \\ 5 & 1 & 10 \end{vmatrix} = 68,$$
 and the final answer is “ $x = 5, y = -3, z = 2$.”

- Lesson 73 – In table 73.2, the rows labeled “X-intercepts” and “Y-intercepts” should be removed from the table.
- Problem Set 75, Practice F and Problem 22 – The 7 in the equations should be a 4. It should be “ $V = \frac{4s^{\frac{3}{2}}}{24\sqrt{\pi}}$.”
- Problem Set 86, Practice D and Problem 18. The simplification steps are not correct in the solution. The answer to #D should be -6 and the answer to #18 should be -4.
- Problem Set 86, Problem 10 – In the problem statement in the textbook, “sample” should be “population.”
- Problem Set 89, Problem 16 – The answer on the solution is wrong, it should be “ $x^6 + 6x^5y + 15x^4y^2 + 20x^3y^3 + 15x^2y^4 + 6xy^5 + y^6$.”
- Lesson 91, Practice F – The solution states that $\frac{dy}{dx} = -2x^2 + 18$ instead of $-2x + 18$. The correct derivative is used when actually working through the problem, but it is misstated in the statement of the problem at the beginning.
- Problem Set 93, Problem 13 – The answers in the answer key for A_1 and C_1 are wrong. They should be “ $A_1 = 59.9^\circ$ (not 60.0°), $C_1 = 90.1^\circ$ (not 90.0°).”
- Chapter 3 Test, Problem 22 – The solution uses an incorrect window size for the calculator of “ $X_{\min} = -10, X_{\max} = 10, Y_{\min} = -50, Y_{\max} = 50$.” It should instead be “ $X_{\min} = -5, X_{\max} = 5, Y_{\min} = -10, Y_{\max} = 10$.”
- Chapter 6 Test, Problem 24 – The graph for this problem is inaccurate. It should be:



- Chapter 8 Test, Problem 8 – The answer choices all have “ α ” but they should be “ θ .”
- Chapter 9 Test, Problem 23 – The second sentence of the problem statement should be “What is the slope of the line representing y as a function of x .”

Errors in older printings:

- Lesson 4, Page 32 – On figure 4.7, the captions “Rotate across y -axis” should be “Reflect across y -axis” and “Rotate across x -axis” should be “Reflect across x -axis.”
- Lesson 5, Page 41 – In the 7th line of text, “The function” should be “ x .”
- Lesson 5, Page 42 – Under figure 5.7, “Multiplying by $\frac{1}{2}$ compresses the parabola, making it wider.” should be “Multiplying the function by $\frac{1}{2}$ compresses the parabola vertically.”
- Lesson 5, Page 43 – In the 2nd line of the last paragraph, “3 places to the right first, Since” should be “3 places to the right first. Since”
- Problem Set 5, Problem 12 –The solution to this problem was cut short. The correct answer is choice D, which is not on the screen.
- Lesson 6, Page 51 – In the 2nd line of paragraph 3, change “ $A(r)$ ” should be “ $A(t)$.”
- Lesson 6, Page 51 – In the 3rd line of paragraph 3, “ $A(r)$ ” should be “ $A(t)$.”
- Lesson 6, Page 52 – In the 7th line of text, “ $(f \circ g)(x)$ ” should be “ $(f \circ x)(t)$.”
- Problem Set 6, Problem 5 – The answers for the x -values are incorrect on the solution. They should be:
$$-1, -0.5, -0.25, 0, 1, 2.$$
- Lesson 11, Page 101 – On figure 11.2, point $(-1, -1)$ should be labeled as $(-1, 1)$.
- Lesson 13, Page 119 – On the 10th line of text from the bottom of the page, “ $f(x)$ ” should be “ $g(x)$.”
- Lesson 19, Page 166 – On the 4th line from the bottom of the page, “lines $x = 2$ and $x = 2$.” should be “lines $x = 2$ and $x = -2$.”
- Lesson 22, Page 191 - In the label of the calculator step figure, “To enter $p(x) =$ ” should be “To enter $r(x) =$ ”
- Lesson 24, Page 210 – In the 15th line of text from the bottom of the page, “ P in 2010 = $12,000,000(1+0.03)^4$ ” should be “ P in 2011 = $12,000,000(1+0.03)^4$.”

- Lesson 28, Page 242 – In the 3rd line of text, “ $\frac{10^7}{10^3}$ ” should be “ $\frac{10^7}{10^4}$ ”.
- Lesson 35, Page 299 – In the 4th line of paragraph 3, “ $0 < t \leq 40$ ” should be “ $0 \leq t \leq 40$.”
- Lesson 35, Page 299 – Underneath paragraph 3, “ $0 < t \leq 40$ ” should be “ $0 \leq t \leq 40$.”
- Lesson 35, Page 299 – In the last line of text, “the pair (630,85)” should be “the pair (85,630).”
- Lesson 35, Page 300 – In the 7th line from the top, “ $85 < t \leq 125$ ” should be “ $85 < t \leq 115$.”
- Lesson 35, Page 300 – Underneath the 9th line from the top
“ $g(t) = \begin{cases} 9t, & 0 < t \leq 40 \\ 6t+120, & 40 < t \leq 85 \\ 15t-645, & 85 < t \leq 115 \end{cases}$ ” should be “ $g(t) = \begin{cases} 9t, & 0 \leq t \leq 40 \\ 6t+120, & 40 < t \leq 85 \\ 15t-645, & 85 < t \leq 115 \end{cases}$.”
- Lesson 38, Page 329 – In the 1st line of paragraph 3, “AC” should be “BC”
- Lesson 38, Page 329 – Underneath paragraph 3, “ $\sin 13^\circ = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{5.5}{BC}$ ” should be
“ $\sin 13^\circ = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{5.5}{AC}$ ”
- Lesson 44, Page 383 – In the 2nd line of paragraph 3, “60 degrees.” should be “30 degrees.”
- Lesson 44, Page 384 – At the end of the section titled “Trig Functions in Radians” the value of $\frac{2\pi}{5}$ should come out to equal 0.9511.
- Lesson 45, Page 390 – In the 8th line of text from the top of the page “+40” should be “-840.”
- Lesson 45, Page 392 – In the 5th line of text in paragraph 3, “y-axis” should be “x-axis”
- Lesson 46, Page 403 – In the 2nd and 12th line of text from the top, “ $y = 5 \cos 2\left(x - \frac{\pi}{2}\right)$ ” should be “ $y = 5 \cos 2\left(x + \frac{\pi}{2}\right)$.”
- Lesson 46, Page 403 – In the 6th line of text from the top, “To enter 2π , we press $\boxed{2}$, $\boxed{2nd}$, $\boxed{\pi}$.” should be “To enter 2π , we press $\boxed{2}$, $\boxed{2nd}$, $\boxed{\wedge}$.”

- Lesson 46, Page 403 – In the 3rd line of paragraph 2, “we press $\boxed{2}$, $\boxed{[}$, $\boxed{X,T,\theta,n}$, $\boxed{=}$, $\boxed{2nd}$, $\boxed{\wedge}$, $\boxed{\div}$, $\boxed{2}$, $\boxed{]}$.” should be “we press $\boxed{2}$, $\boxed{[}$, $\boxed{X,T,\theta,n}$, $\boxed{+}$, $\boxed{2nd}$, $\boxed{\wedge}$, $\boxed{\div}$, $\boxed{2}$, $\boxed{]}$.”
- Lesson 46, Page 403 – The equation on the screen shot at the bottom of the page should be “ $y = 5\cos 2\left(x + \frac{\pi}{2}\right)$.”
- Lesson 47, Page 412 – In the first line under Figure 47.1, add “by” between “divided adjacent.”
- Lesson 47, Page 412, the paragraph above Figure 47.2 has been rewritten, it should now read:

By the time P gets to the y -axis, y equals 1 and x has gone to 0. Since the denominator of $\frac{y}{x}$ can never be 0, α can't equal 90° . That means unlike the sine and cosine functions, the tangent function has an asymptote at 90° . When P is in the second quadrant, the value of $\tan \alpha$ is negative. That's because y is positive, but x is negative. The function approaches negative infinity when α approaches 90° from the left. And as α increases to 180° , the function gets closer and closer to 0. At 180° the function is exactly equal to 0. When P is in the third quadrant, $\tan \alpha$ is positive because both y and x are negative. As P move through the third quadrant, the function goes from 0 to positive infinity. When α equals 270° , $\tan \alpha$ is not defined, which means there's another asymptote at 270° .
- Lesson 47, Page 414 – On the last line of the page, the word “inverse” should be “reciprocal”
- Lesson 47, Page 417 – On the 3rd line of paragraph 3, “ $y = a\sin(bx)$ is reflected across the origin.” should be “ $y = a\sin(bx)$ is reflected across the x -axis.”
- Lesson 48, Page 424 – On the 2nd line of paragraph 4, “we can create $r(q(x))$ by substituting $\log x$ in for x in $\cos x$.” should be “we can create $q(r(x))$ by substituting in $\cos x$ for x in $\log x$.”
- Lesson 48, Page 424 – On the 10th line form the top of the page, “ $r(q(x)) = \cos(\log x)$ ” should be “ $q(r(x)) = \log(\cos x)$.”
- Lesson 48, Page 424 – On the 11th line of text, “ $r\left(q\left(\frac{\pi}{3}\right)\right)$ ” should be “ $q\left(r\left(\frac{\pi}{3}\right)\right)$.”

- Lesson 50, Page 453 – On the 3rd line of the second paragraph, “ $Y_{\min} = -2$ and $Y_{\min} = 2$ ” should be “ $Y_{\min} = -2$ and $Y_{\max} = 2$.”
- Lesson 51, Problem 9 – The answer in the answer key is wrong. It should say “No solution.”
- Lesson 52, Page 470 – On the 11th line from the top, “equal the secant of θ .” should be “equal the square of the secant of θ .”
- Lesson 56, Page 503 – On the 1st line under table 56.1, “ $\sin 2\alpha = 2\sin \alpha \cos \beta$ ” should be “ $\sin 2\alpha = 2\sin \alpha \cos \alpha$.”
- Lesson 58, Page 520 – On the 2nd line from the top, “ $2\sin^2 x - \sin x = 1$ ” should be “ $2\sin^2 x + \sin x = 1$.”
- Lesson 62, Page 556 – On the 14th line from the top, “function for y-coordinate” should be “function for x-coordinate.”
- Lesson 63, Page 567, On the first line above the section titled “**Working with Polar Coordinates**,” the word “then” should be “than.”
- Lesson 67, Page 611 – On the 2nd line from the bottom of the page, “ $y = \frac{N_z}{D} = \frac{-220}{-660} = \frac{1}{3}$,” should be “ $z = \frac{N_z}{D} = \frac{-220}{-660} = \frac{1}{3}$.”
- Lesson 70, Page 633 – On the 3rd line of text from the top of the page, “ $3x - 5 \leq 4$ ” should be “ $-3x - 5 \leq 4$.”
- Lesson 75, Page 688 – On the 10th line of text from the top of the page, “ $4x^2 - y^2 + 32x + 2y - 59 = 0$ ” should be “ $4x^2 - y^2 + 32x + 2y + 59 = 0$.”
- Problem Set 86, Practice D and Problem 18 – The simplification steps on the solution are not correct. The answer to practice D should be -6 and the answer to problem 18 should be -4 .
- Lesson 87, Page 788 – On the 11th line from the bottom of the page, “If we the object” should be “If the object.”
- Problem Set 87, Practice F – The problem instructions should be changed to “Given that the speed (in feet per second) of a bungee jumper can be represented by the function $v(t) = 32t$, how many feet will the jumper fall in the first two seconds?”

- Lesson 88, Page 794 – The start of the paragraph above Figure 88.5 should read “It’s possible to get.” The word “make” should be removed.
- Lesson 91, Page 821 – On the 2nd line of the 2nd paragraph under “**Cutting Out Extra Information**,” the sentence “If there’s had been a missing term, then we would have need...” should be “If there had been a missing term, then we would have needed....”
- Problem Set 91, Problem 22 – The practice companion is listed incorrectly. “(e)22.” should be “(f) 22.”
- Lesson 93, page 838 – On the 3rd line of the 2nd paragraph from the bottom of the page, “gives an answer of -53.3° ” should be “gives an answer of -53.1° .”
- Problem Set 93, Problem 14 – The answer to this problem is wrong in the answer key. It should be:

$$a_1 = 75.9, \angle A_1 = 65.1^\circ, \angle B_1 = 72.9^\circ$$

$$a_2 = 43.0, \angle A_2 = 30.9^\circ, \angle B_2 = 107.1^\circ$$
- Problem set 94, Practice C – The choices for this problem should be:
 - 21.3(cos 3.8° + i sin 3.8°); 21.3(cos 123.8° + i sin 123.8°); 21.3(cos 243.8° + i sin 243.8°)
 - 4(cos 3.8° + i sin 3.8°); 4(cos 123.8° + i sin 123.8°); 4(cos 243.8° + i sin 243.8°)
 - 262,144(cos 57° + i sin 57°)
 - 4(cos 18° + i sin 18°); 4(cos 138° + i sin 138°); 4(cos 258° + i sin 258°)
 - 21.3(cos 18° + i sin 18°); 21.3(cos 138° + i sin 138°); 21.3(cos 258° + i sin 258°)
- Problem Set 94, Problem 17 – The choices for this problem should be:
 - 9(cos 10° + i sin 10°); 9(cos 130° + i sin 130°); 9(cos 250° + i sin 250°)
 - 3(cos 3.1° + i sin 3.1°); 3(cos 123.1° + i sin 123.1°); 3(cos 243.1° + i sin 243.1°)
 - 19,683(cos 33° + i sin 33°)
 - 9(cos 3.1° + i sin 3.1°); 3(cos 123.1° + i sin 123.1°); 3(cos 243.1° + i sin 243.1°)
 - 3(cos 10° + i sin 10°); 3(cos 130° + i sin 130°); 3(cos 250° + i sin 250°)
- Chapter Test 14, Problem 18 – The instructions for this problem should be, “Select the third roots of the complex number below”.