Math 3 Changes Summer 2024

Note that the numbers below refer to the 2024-2025 edition, unless followed by a ('23) in which case they refer to the 2023-2024 edition.

2	added question about cylinder
17	added question about cone
22	deleted last question, edited answer/commentary
23	edited commentary, removed reference to Math 2 deleted problem
32	added to commentary discussion about t vs θ
54	unitalicized negative
67	fixed commentary typo, edited commentary to fix reference and provide clarity
73	fixed answer typo
87	fixed commentary reference
120	fixed answer typo
155	unitalicized "could" and "must"
159	${f u}$ and ${f v}$ nonzero addition
171	changed "coefficient matrix" to "transformation matrix"
190	changed "coefficient" to "transformation"
192	unitalicized "written as columns"
225	edited to included definition of "inverse matrix", slight rewording
230	added altitude of plane, edited answer/commentary
231	changed to 3×3 matrix, moved from #222('23), edited answer/commentary
237	added "invertible" to beginning, slight rewording of first sentence
238	unitalicized "non-invertible"
245	unitalicized last sentence, added r is height
250	removed spacing edits from diagram placement in ('23) version
253	edited diagram spacing
254	edited spacing for diagram in 253
268	added parts, added C invertible, slight rewording, unitalicized "variables"
270	slight rewording of first sentence
288	changed population to 8 000 000 000, edited answer/commentary
325	added with graphing tool, added another part about graphing by hand
336	adjusted diagram spacing
337	adjusted spacing, does it look better before or after?
341	added "by hand", and without calculator verbiage
353	changed "licorice" to string or thin cord, edited commentary
365	added with graphing tool, added another part about graphing by hand
374	added "where have you seen this before?"
384	reworded instructions
386	fixed equation spacing
394	fixed equation spacing, edited diagram spacing
411	unitalicized square roots and cube roots
424	added $PEABODY$ labeling, edited answer/commentary
426	added "plausible"
441	unitalicized "decade" and "monthly"

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455	unitalicized "find an exponent"							
468	unitalicized eccentricity sentence							
480	unitalicized eccentricity sentence and "two-thirds"							
491	unitalicized hint							
494	unitalicized first sentence							
503	unitalicized "not" and "are"							
504	unitalicized "below"							
553	added question about domain, range, edited answer/commentary							
562	added question about domain, range, edited answer/commentary							
567	added question about domain, edited answer/commentary							
572	added question about range, edited answer/commentary							
578	added question about domain, range, edited answer/commentary							
598	edited commentary							
601	edited spacing of large numbers for consistency							
610	added scale to axes							
632	swapped last two questions, edited answer/commentary							
633	unitalicized restaurants							
634	unitalicized restaurants							
637	unitalicized "this"							
639	unitalicized "addition problem," edited commentary							
644	unitalicized restaurants, changed The Green Bean to Big Bean							
654	swapped with #655, changed to radians, edited answer/commentary							
655	swapped with #654, changed to radians, edited answer/commentary							
662	unitalicized "inconsistent"							
666	swapped with #675, changed to radians, edited answer/commentary, edited spacing							
	for diagram in $\#676('23)$ version							
671	removed italics "twice" and "through the telephone"							
672	unitalicized "domain," edited commentary							
673	unitalicized "range," edited commentary							
675	swapped with #666, changed to radians, edited answer/commentary, edited							
	spacing for diagram in $\#676$							
753	deleted first part, slight rewording							
759	deleted "use the distance formula"							
766	added question about regular heptagon, edited answer/commentary							
772	edited numbers, edited answer/commentary							
809	deleted references to less than \$300							
810	edited to be a question							
p.95	fixed problem number reference							
p.98	deleted last sentence in reference of "confocal conics,"							
p.100	removed reference in "domain" to a problem in supplement							
p.100	added "dilation matrix" to reference							
p.103	edited "inverse matrix" reference problem order							
p.103	added "invertible matrix" to reference							
p.107	unitalicized bases, added "polygonal" to definition of prism							
p.107	adjusted projection diagram							

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p.108	added "reflection matrix" to reference
p.109	added "shear matrix" to reference
p.110	added to definition of "singular matrices"
p.112	added "transformation matrix" to reference
635 -1	adjusted diagram spacing from ('23) due to page break
hint	changed the hint macro which makes all hint words unitalicized - easy to undo if wished

The following problems were moved to a Math 3 Appendix. This Appendix was created in 2023 as a place for problems that have been skipped in recent years due to limited class and homework time for our students. No changes were made to the Appendix in 2024 except as listed above. The numbering system indicates where they came from in our book, for example, 122-1 and 122-2 are problems that directly followed problem 122.

11-1	230 - 1	326-1	406 - 2	561-1	612-1	728-1	783 - 2	812-3	838-1
27 - 1	288-1	341 - 1	412 - 1	574 - 1	620-1	736 - 1	788-1	816-1	838-2
31-1	310 - 1	351 - 1	450 - 1	591-1	630-1	744 - 1	795 - 1	816-2	838 - 3
122 - 1	316 - 1	363 - 1	477 - 1	591 - 2	635 - 1	745 - 1	796 - 1	819-1	838 - 4
122 - 2	319 - 1	391-1	477 - 2	609-1	656 - 1	745-2	803-1	831-1	838 - 5
168 - 1	320 - 1	395 - 1	477 - 3	609 - 2	680-1	775 - 1	812-1	834-1	838-6
191-1	320 - 2	406 - 1	502 - 1	609 - 3	680 - 2	783 - 1	812 - 2	834 - 2	838-7