

Math 323 - Calculus III - Section 6 - Fall 2026

Selected Solutions for Fall 2026 Midterms

0.1 Midterm 1

Ver A #1; Ver B #5 (means problem 1 of Ver A which is problem 5 of Ver B):

#1a: $\langle 18, 4, 1 \rangle$ #1b1: 7 #1b2: $\cos^{-1}\left(\frac{7}{\sqrt{130}}\right)$

#1c1: $\langle -1, -1, 5 \rangle$ #1c2: $\sqrt{28} \sin \theta$

Ver A #2; Ver B #3: #2a: $z = 6t - 4$ #2b: $\frac{5-x}{2} = \frac{3-y}{4} = \frac{z+4}{6}$

Ver A #3; Ver B #1: #3a: $\frac{2}{\sqrt{6}}$ #3b: $\langle -6, 4, 0 \rangle; \langle -6, -4, 8 \rangle$

Ver A #4; Ver B #6: #4a: $\langle \sqrt{5}, 3 \cos t, 3 \sin t \rangle$ #4b: $\langle \sqrt{5}/\sqrt{14}, 3/\sqrt{14}, 0 \rangle$
#4c: $4\sqrt{14}$ #4d: $\sqrt{14}$

Ver A #5; Ver B #2: #5a: $\langle e^t + 2, -et^2 + t + 2, e^{-t} \rangle$ #5b: Item #1 (upper left)

Ver A #6; Ver B #4: $C \quad E \quad A \quad F \quad B \quad D$