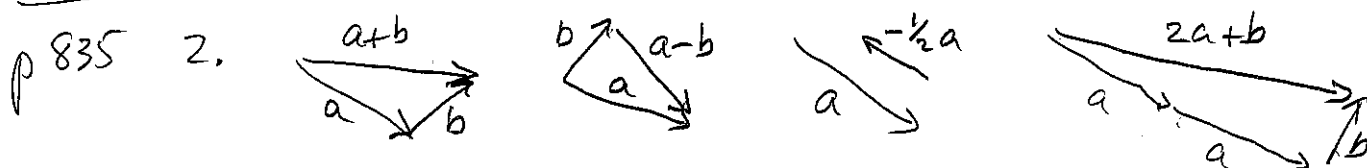


MA 162 EXAM 1 REVIEW, EVEN ANSWERS

Chapter 12 p 835 / 1, 2, 3, 4, 5, 6, 11, 12

Chapter 6 p 457 / 2, 4, 7, 8, 10, 12, 14, 16, 23, 27, 29a, 30

Chapter 7 p 530 / 4, 6



4. a) $\langle 11, -4, -1 \rangle$ b) $\sqrt{14}$ c) -1 d) $\langle -3, -7, -5 \rangle$

e) $3\sqrt{35}$ f) 18 g) $\vec{0}$ h) $\langle 33, -21, 6 \rangle$ i) $-\frac{1}{\sqrt{6}}$

j) $\langle -\frac{1}{6}, -\frac{1}{6}, \frac{1}{3} \rangle$ k) $\cos^{-1}\left(\frac{-1}{\sqrt{6}\sqrt{14}}\right)$

6. $\pm \frac{1}{\sqrt{54}} \langle 7, 2, -1 \rangle$ 12. 87 newton-meters

p. 457 2. $\frac{4}{3}$ 4. $\frac{32}{3}$ 8. $\frac{117}{5}\pi$ 10. 256π

12. $\int_0^{\pi/3} 2\pi x (\tan x - x) dx$ 14. $\int_0^1 \pi [(2-x^2)^2 - (2-\sqrt{x})^2] dx$

16. a) $\frac{5}{12}$ b) $\frac{41}{105}\pi$ c) $\frac{13}{30}\pi$ (or $\int_0^1 2\pi y (\sqrt{y} - y^2) dy$)

30. $\frac{1}{20} (1 - \cos 100)$

p 530 4. $\frac{\sqrt{3}}{8} - \frac{\pi}{24}$ 6. $\frac{32}{3} \ln 2 - \frac{7}{4}$