

MAT170 PRECALCULUS EXAM 03 - REVIEW (SOLUTIONS)

5.

- a. Solutions may vary.
- b. Solutions may vary.
- c. Solutions may vary.

6.

- a. $\frac{\sqrt{6} - \sqrt{2}}{4}$
- b. $-\frac{\sqrt{6} + \sqrt{2}}{4}$
- c. $\frac{\sqrt{2}}{2}$
- d. $-\frac{\sqrt{2}}{2}$

7.

- a. $\frac{\sqrt{3}}{2}$
- b. $-\frac{\sqrt{3}}{2}$
- c. $-\frac{1}{4}$
- d. $\frac{\sqrt{2}}{2}$

8.

- a. $\frac{1}{4}$
- b. $\frac{2 - \sqrt{3}}{16}$
- c. $\frac{1}{7 + 4\sqrt{3}}$
- d. $\frac{7 + 4\sqrt{3}}{16}$

9.

- a. $\frac{\sqrt{2 - \sqrt{3}}}{2} - \frac{\sqrt{2 + \sqrt{3}}}{2}$
- b. $\sqrt{\frac{2 - \sqrt{3}}{2 + \sqrt{3}}}$
- c. $\frac{2 + \sqrt{3}}{4}$
- d. $\frac{\sqrt{2 - \sqrt{2 + \sqrt{2}}}}{2}$

10.

- a. $\frac{\sqrt{3} - 2}{4}$
- b. $\frac{1 + \sqrt{3}}{4}$
- c. $\frac{1}{4}$
- d. $-\frac{1 + \sqrt{3}}{4}$

11.

- a. $\frac{\sqrt{6}}{2}$
- b. $-\frac{\sqrt{2}}{2}$
- c. $-\frac{\sqrt{2}}{2}$
- d. $\sqrt{2}$

12.

- a. $A = 66^\circ, B = 80^\circ, C = 34^\circ$
 $a = 16, b = 17.25, c = 9.79$
- b. $A = 105, B = 53.6^\circ, C = 21.4^\circ$
 $a = 12, b = 10, c = 4.53$

13.

- a. $A = 46.94^\circ, B = 91.06^\circ, C = 42^\circ$
 $a = 19, b = 26, c = 17.4$
- b. $A = 28.96^\circ, B = 46.57^\circ, C = 104.48^\circ$
 $a = 20, b = 30, c = 40$