

Trig Equations Exam Review

- ① a) 136°
 b) 179°
 c) 31°

- ② a) $400^\circ, 760^\circ, -320^\circ, -680^\circ$
 b) $-90^\circ, -810^\circ, 270^\circ, 630^\circ$
 c) $230^\circ, 950^\circ, -130^\circ, -490^\circ$

③ $\sin \theta = \frac{-2\sqrt{13}}{13}$

$\csc \theta = -\frac{\sqrt{13}}{2}$

④ a) $-\frac{\sqrt{2}}{2}$

$\cos \theta = \frac{3\sqrt{13}}{13}$

$\sec \theta = \frac{\sqrt{13}}{3}$

b) $\frac{2\sqrt{3}}{3}$

$\tan \theta = -\frac{2}{3}$

$\cot \theta = -\frac{3}{2}$

c) $\sqrt{3}$

- ⑤ a) 240° and 300° ; $240^\circ + 360k, 300^\circ + 360k$
 b) $0^\circ, 180^\circ, 210^\circ, 330^\circ, 360^\circ$; $180^\circ + 360k, 210^\circ + 360k, 330^\circ + 360k, 360^\circ + 360k$
 c) 90° and 270° ; $90^\circ + 360k, 270^\circ + 360k$
 d) 30° and 150° ; $30^\circ + 360k, 150^\circ + 360k$

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⑥ a) $-3 - 3\sqrt{2}$

d) $\frac{\sqrt{2} + \sqrt{6}}{2}$

b) $-2 + 2\sqrt{3}$

e) 1

c) $\frac{4\sqrt{3} - 5}{46}$

f) $-\frac{\sqrt{6}}{2}$