

2. Solve each equation for  $0 \leq x \leq 360^\circ$ .

- a)  $\sin x + 1 = 0$   
 b)  $\sqrt{2}\cos x - 1 = 0$   
 c)  $2\sin x - \sqrt{3} = 0$   
 d)  $\sqrt{2}\cos x + 1 = 0$   
 e)  $2\sin x + 1 = 0$   
 f)  $\tan x = -1$

3. Solve each equation for  $0^\circ \leq x \leq 360^\circ$ .

- a)  $2\cos^2 x - 7\cos x + 3 = 0$   
 b)  $3\sin x = 2\cos^2 x$   
 c)  $2\sin^2 x - 3\sin x - 2 = 0$   
 d)  $\sin^2 x - 1 = \cos^2 x$   
 e)  $\tan^2 x - 1 = 0$   
 f)  $2\sin^2 x + 3\sin x + 1 = 0$   
 g)  $2\cos^2 x + 3\sin x - 3 = 0$

14. Solve each equation on the interval  $0^\circ \leq x \leq 360^\circ$ .

- a)  $\sin 2x = 1$                       b)  $\cos 2x = -1$                       c)  $2\sin 2x = 1$   
 d)  $2\cos 2x = 1$                       e)  $\sqrt{2}\cos 2x = 1$                       f)  $2\sin 2x = \sqrt{3}$   
 g)  $2\cos 2x = -\sqrt{3}$                       h)  $\sin 2x = 0$                       i)  $2\sin 0.5x = 1$

5. Solve for  $x$  on the interval  $0^\circ \leq x \leq 360^\circ$ .

Round approximate solutions to the nearest tenth of a degree.

- a)  $4\cos x - 3 = 0$   
 b)  $1 + \sin x = 4\sin x$   
 c)  $6\cos^2 x - \cos x - 1 = 0$   
 d)  $9\sin^2 x - 6\sin x + 1 = 0$   
 e)  $16\cos^2 x - 4\cos x + 1 = 0$   
 f)  $6\cos^2 x + \sin x - 4 = 0$

11. Solve for  $x$  on the interval  $0^\circ \leq x \leq 360^\circ$ .

- a)  $2\sin x \tan x - \tan x - 2\sin x + 1 = 0$   
 b)  $\cos x \tan x - 1 + \tan x - \cos x = 0$

2. a)  $270^\circ$  b)  $45^\circ, 315^\circ$  c)  $60^\circ, 120^\circ$  d)  $135^\circ, 225^\circ$

e)  $210^\circ, 330^\circ$  f)  $135^\circ, 315^\circ$  3. a)  $60^\circ, 300^\circ$  b)  $30^\circ, 150^\circ$

c)  $210^\circ, 330^\circ$  d)  $90^\circ, 270^\circ$  e)  $45^\circ, 135^\circ, 225^\circ, 315^\circ$  f)  $210^\circ,$

$270^\circ, 330^\circ$  g)  $30^\circ, 90^\circ, 150^\circ$

5. a)  $41.4^\circ, 318.6^\circ$

b)  $19.5^\circ, 160.5^\circ$  c)  $60^\circ, 109.5^\circ, 250.5^\circ, 300^\circ$  d)  $19.5^\circ, 160.5^\circ$

e) no solutions f)  $41.8^\circ, 138.2^\circ, 210^\circ, 330^\circ$

11. a)  $30^\circ, 45^\circ, 150^\circ,$

$225^\circ$  b)  $45^\circ, 180^\circ, 225^\circ$

14. a)  $45^\circ, 225^\circ$  b)  $90^\circ, 270^\circ$  c)  $15^\circ, 75^\circ, 195^\circ,$

$255^\circ$  d)  $30^\circ, 150^\circ, 210^\circ, 330^\circ$  e)  $22.5^\circ, 157.5^\circ, 202.5^\circ,$

$337.5^\circ$  f)  $30^\circ, 60^\circ, 210^\circ, 240^\circ$  g)  $75^\circ, 105^\circ, 255^\circ, 285^\circ$  h)  $0^\circ,$

$90^\circ, 180^\circ, 270^\circ, 360^\circ$  i)  $60^\circ, 300^\circ$