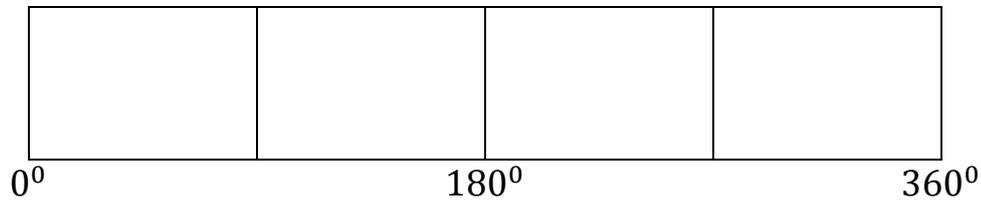


## Solving Trigonometric Equations

1. Using a quadrant grid as shown below, sketch each of the following graphs where  $0 \leq x \leq 360^\circ$ :



a.  $y = \sin x$

b.  $y = \cos x$

c.  $y = \tan x$

2. Solve each of the following equations where  $0 \leq x \leq 360^\circ$ :

a.  $\sin x = 0.866$

b.  $\sin x = 0.5$

c.  $\cos x = 0.5$

d.  $\cos x = \frac{3}{4}$

e.  $\tan x = \frac{3}{4}$

f.  $\tan x = \frac{6}{5}$

g.  $\sin x = 0.35$

h.  $\cos x = 0.15$ .

3. Solve each of the following equations where  $0 \leq x \leq 360^\circ$ :

a.  $\sin x = -0.707$

b.  $\cos x = -0.5$

c.  $\tan x = -1.73$

d.  $\tan x = -2$

e.  $\cos x = -\frac{3}{7}$

f.  $\sin x = -\frac{4}{9}$

g.  $\cos x = -0.78$

h.  $\sin x = -\frac{5}{8}$

4. Solve each of the following equations where  $0 \leq x \leq 360^\circ$ :

a.  $4 \sin x = 1$

b.  $7 \cos x = 3$

c.  $5 \tan x = 3$

d.  $5 \tan x = -3$

e.  $4 \sin x = -3$

f.  $5 \tan x = -8$

g.  $4 \cos x = -1$

h.  $6 \sin x = 4$

5. Solve each of the following equations where  $0 \leq x \leq 360^\circ$ :

a.  $\sin x - 0.3 = 0$

b.  $\cos x + 0.8 = 0$

c.  $\tan x + 3.2 = 0$

d.  $\sin x + 0.2 = 1$

e.  $3 \sin x + 2 = 1$

f.  $4 \cos x + 2 = 5$

g.  $5 + 2 \tan x = 10$

h.  $3 - 7 \sin x = 7$

6. Find the roots of the graphs where  $0 \leq x \leq 360^\circ$ :

a.  $y = 3 \sin x$

b.  $y = 2 \sin x + 1$

c.  $y = 3 \cos x - 2$

g.  $y = 6 \tan x + 5$