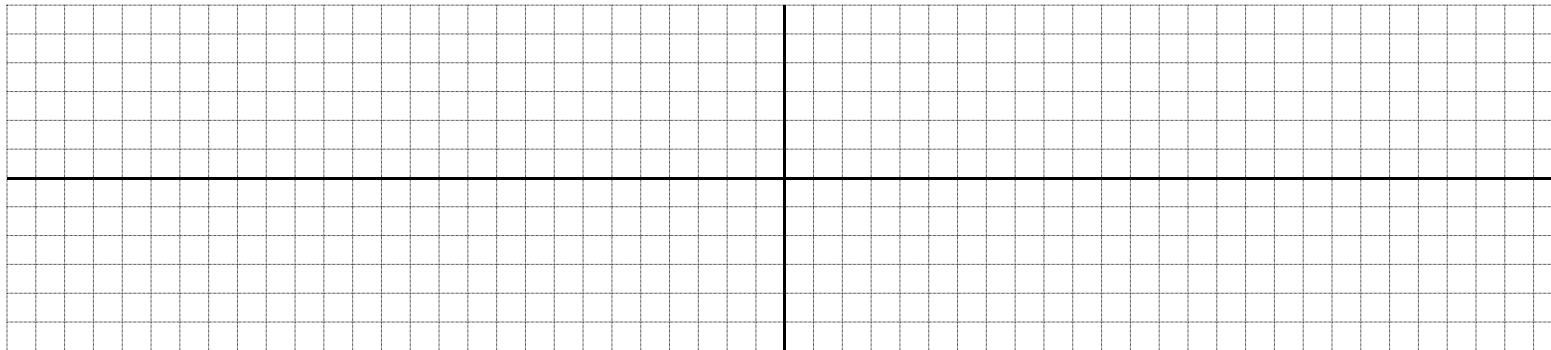


MCR 3UI – Graphs of Trig Functions

Using a table of values, we can graph the trig functions for $x \in \mathbf{R}$ (where x is the angle measurement):

| θ | 0 | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° | 330° | 345° | 360° |
|-----------------------------------|---|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| $\sin \theta$ <i>(exact)</i> | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\sin \theta$ <i>(decimal)</i> | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\cos \theta$ <i>(exact)</i> | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\cos \theta$ <i>(decimal)</i> | | | | | | | | | | | | | | | | | | | | | | | | | |

a) $y = \sin x$



MAX VALUE:

MIN VALUE:

X-INT:

Y-INT:

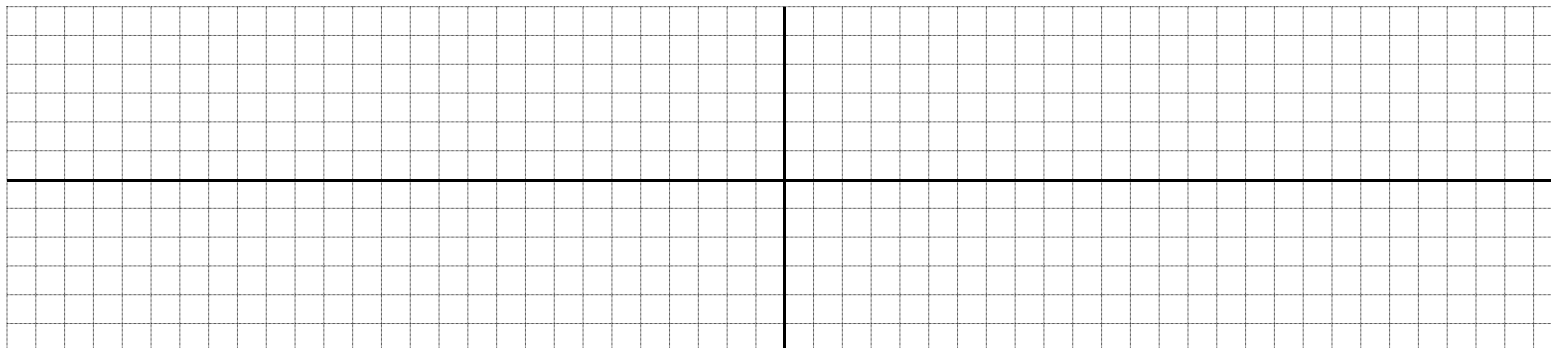
DOMAIN:

RANGE:

PERIOD:

AMPLITUDE:

b) $y = \cos x$



MAX VALUE:

MIN VALUE:

X-INT:

Y-INT:

DOMAIN:

RANGE:

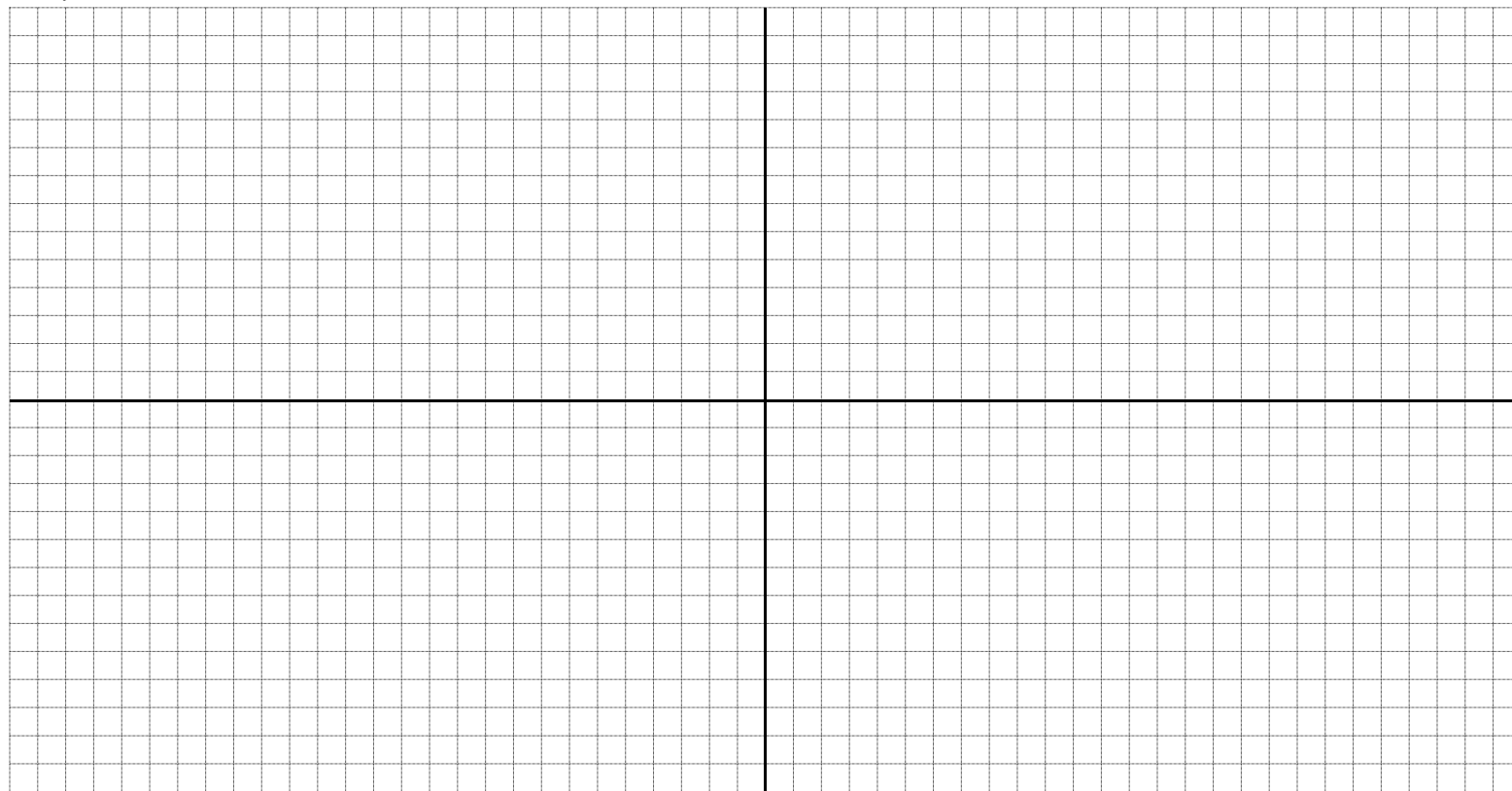
PERIOD:

AMPLITUDE:

For the graph of $f(x) = \tan x$, we use the fact that $\tan \theta = \frac{\sin \theta}{\cos \theta}$ to create a new table of values:

| θ | 0 | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° | 135° | 150° | 165° | 180° | 195° | 210° | 225° | 240° | 255° | 270° | 285° | 300° | 315° | 330° | 345° | 360° | |
|---------------|---|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| $\sin \theta$ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\cos \theta$ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\tan \theta$ | | | | | | | | | | | | | | | | | | | | | | | | | | |

c) $y = \tan x$



MAX VALUE:

MIN VALUE:

X-INT:

Y-INT:

DOMAIN:

RANGE:

PERIOD:

AMPLITUDE: