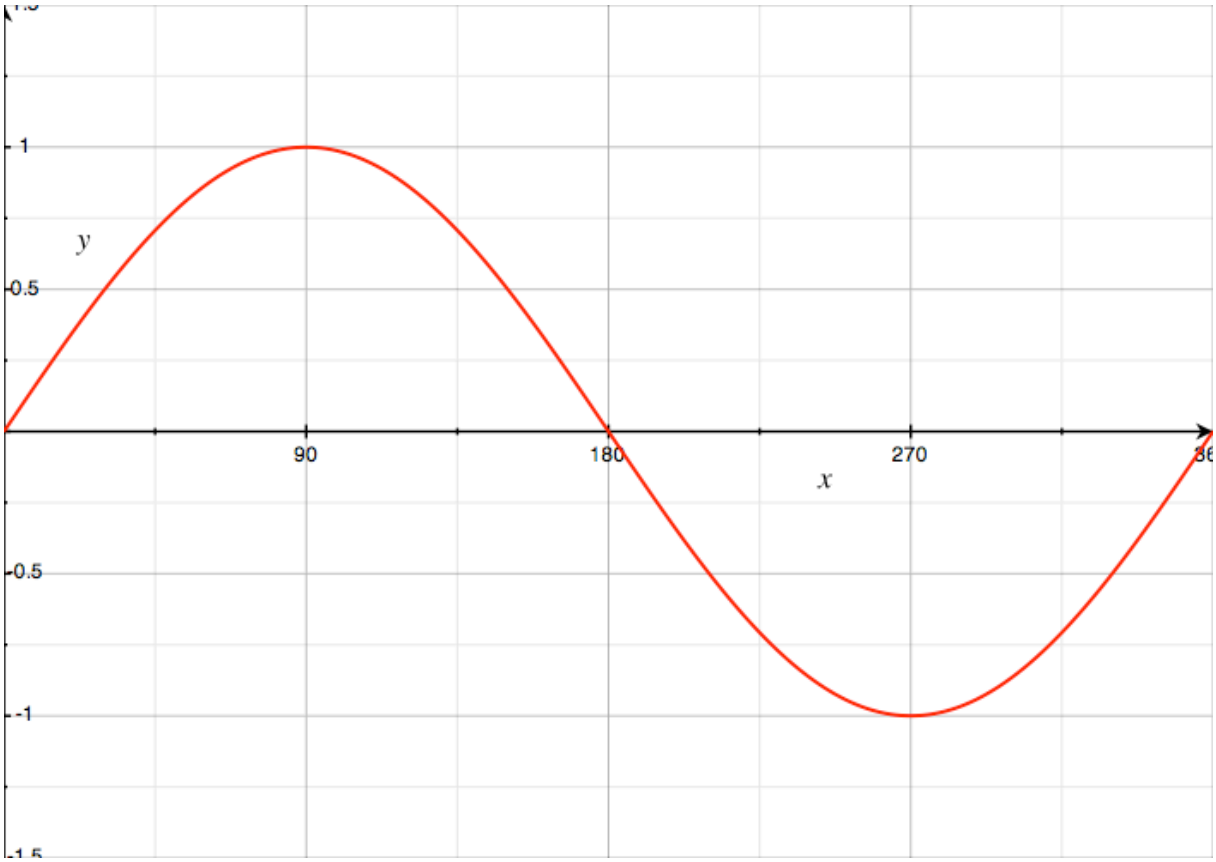
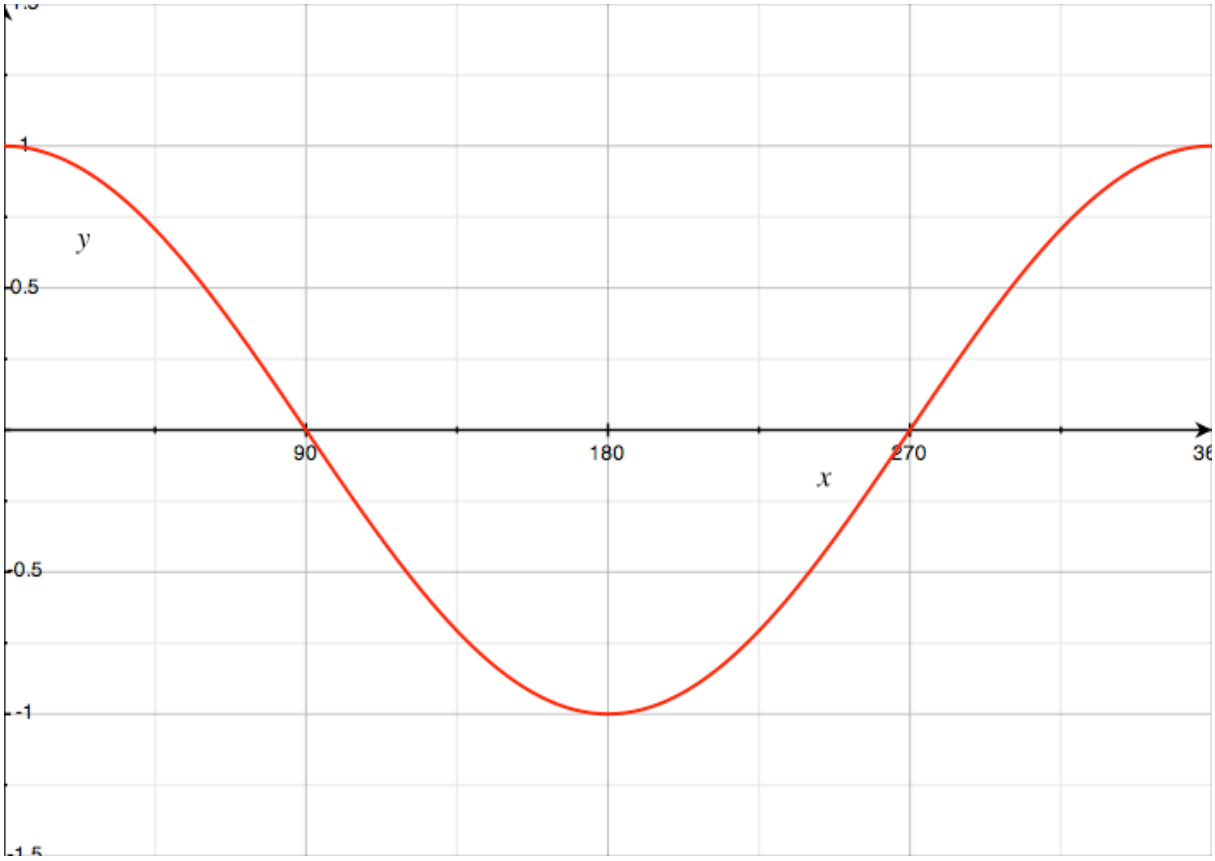
The graphs of sin*x*, cos*x* and tan*x*

Sine



- The maximum value of sin*x* is 1. At $x = 90°$, sin*x* = 1.
- The minimum value of sin*x* is −1. At $x = 270°$, sin*x* = −1.
- The graph of sin*x* crosses the *x*-axis three times in the interval $0° \leq x \leq 360°$. At $x = 0°$, 180°, and 360°, sin*x* = 0.
- The graph of sin*x* is the same shape as the graph of cos*x*, but it is shifted 270° to the left or 90° to the right.

Cosine



- The maximum value of cos$x$ is 1. At $x = 0°$ and $x = 360°$, cos$x$ = 1.
- The minimum value of cos$x$ is −1. At $x = 180°$, cos$x$ = −1.
- The graph of cos$x$ crosses the x-axis twice in the interval $0° \leq x \leq 360°$. At $x = 90°$ and $x = 270°$, cos$x$ = 0.
- The graph of cos$x$ is the same shape as the graph of sin$x$, but it is shifted 90° to the left or 270° to the right.

Tangent

- The maximum value of tan$x$ is ∞.
- The minimum value of tan$x$ is −∞.
- The value of tan$x$ is undefined at $x = 90°$ and $x = 270°$.
- The graph of tan$x$ crosses the x-axis three times in the interval $0° \leq x \leq 360°$. At $x = 0°$, $x = 180°$, and $x = 360°$, tan$x = 0$.