(2) 1/25 - 1/26

Graph:

$y = x^3$

~~$y = (x+2)^3$~~

$y = \frac{1}{2}(x-2)^3 + 1$

Even / odd functions:

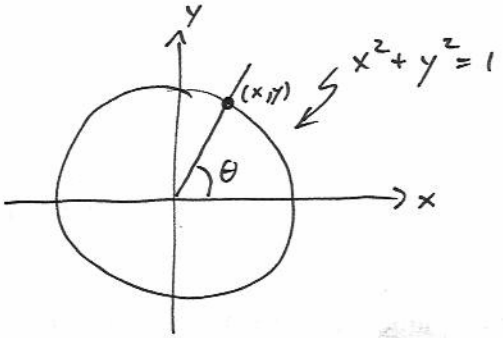
f is even provided $f(-x) = f(x)$ for all x

f is odd provided $f(-x) = -f(x)$ for all x

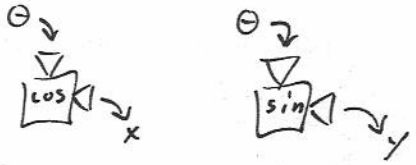
- Is $\frac{x^3}{x^2+1}$ even or odd?
- Is $3x^6 - x^4 + x^2$ even or odd?

1.5 Trig Functions

Consider the unit circle



How to get x and y from θ?



$x = \cos\theta$ $\quad y = \sin\theta$ $\quad \tan\theta = \frac{\sin\theta}{\cos\theta}$

$\sec\theta = \frac{1}{\cos\theta}$ $\quad \csc\theta = \frac{1}{\sin\theta}$ $\quad \cot\theta = \frac{\cos\theta}{\sin\theta}$

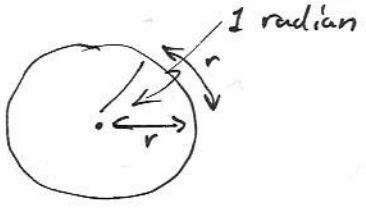
Important identity:

- $\sin^2\theta + \cos^2\theta = 1$

see inside cover for more.

Radians

1 rad = angle spanned by arc length of 1 radius



How many radians in circle? 2π