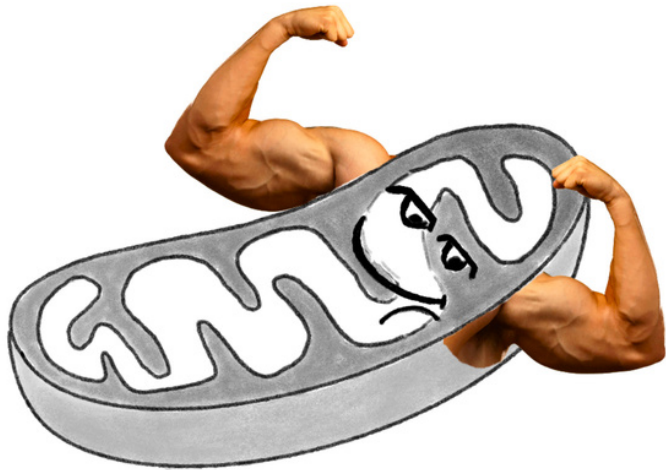
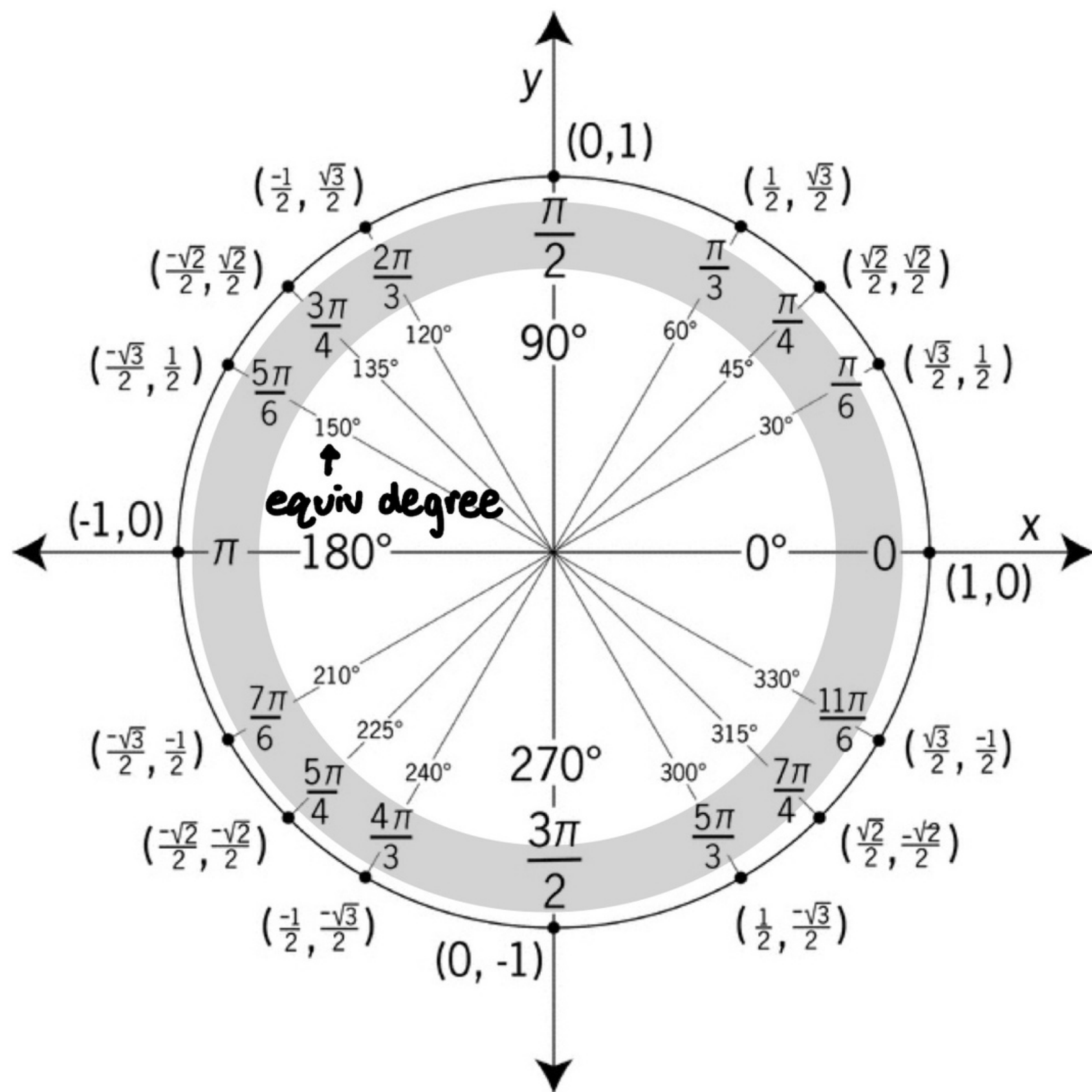


PRE-CALC

UNIT CIRCLE





 = angle in radians

SIGNS:

Sin is
positive

All are
positive

Tan is
positive

Cos is
positive

REMEMBER:

Sin = y value Cos = x value

$$\tan = \frac{y}{x} = \text{slope}$$

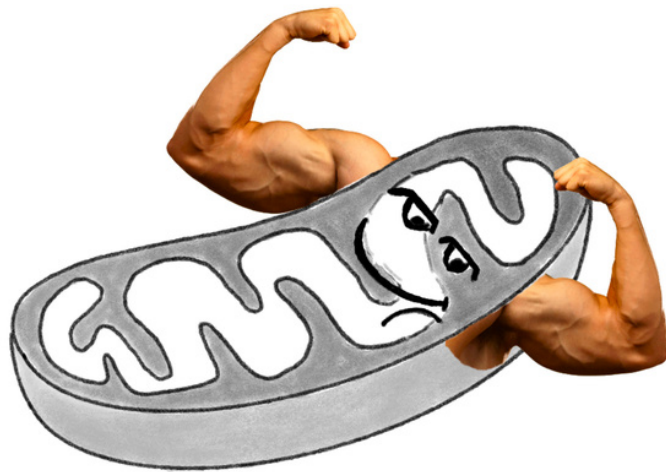
eg: @ $\frac{\pi}{6}$ on unit circle, points
are $(\frac{\sqrt{3}}{2}, \frac{1}{2}) \rightarrow \sin \frac{\pi}{6} = \frac{1}{2}$,

$$\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}, \quad \tan \frac{\pi}{6} = \frac{1}{2} \div \frac{\sqrt{3}}{2} = \frac{1}{\sqrt{3}}$$

PRE-CALC

GRAPHING POLYNOMIALS

GUIDE



1. DEGREE

→ degree = highest exponent

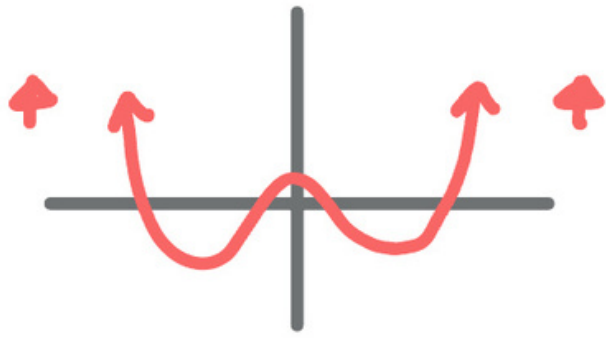
even degree: both ends point
in the SAME direction

odd degree: both ends point
in DIFFERENT directions

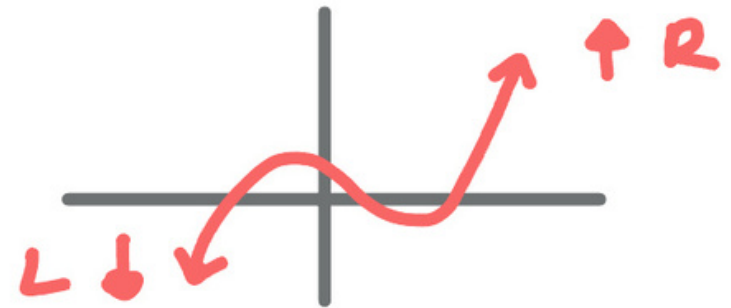
2. LEADING COEFFICIENT

→ determines end behaviour

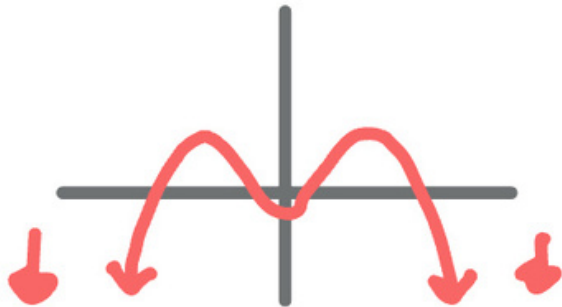
positive LC + even degree



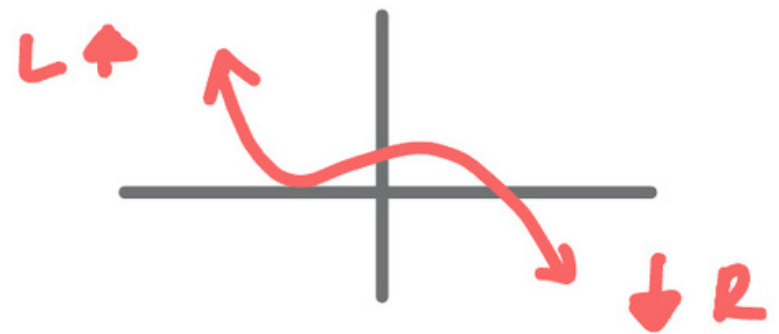
positive LC + odd degree



negative LC + odd degree



negative LC + odd degree

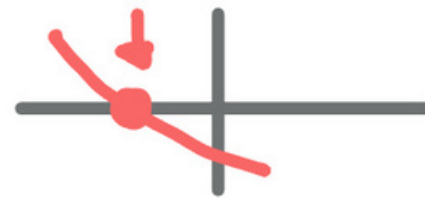


3. X-INT & MULTIPLICITY

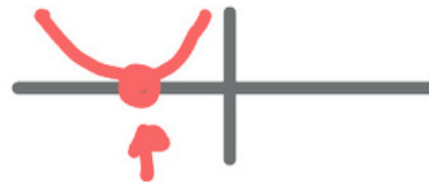
→ multiplicity: how many times a zero (x-int) repeats

eg. $(x-2)^2 \rightarrow$ multiplicity of 2

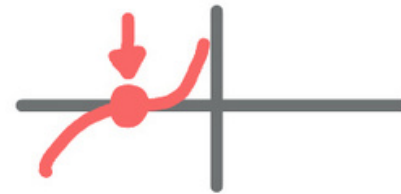
multiplicity of 1: graph
CROSSES THROUGH x-int



multiplicity of 2: graph
TOUCHES & BOUNCES BACK



multiplicity of 3: graph
crosses but **FLATTENS**



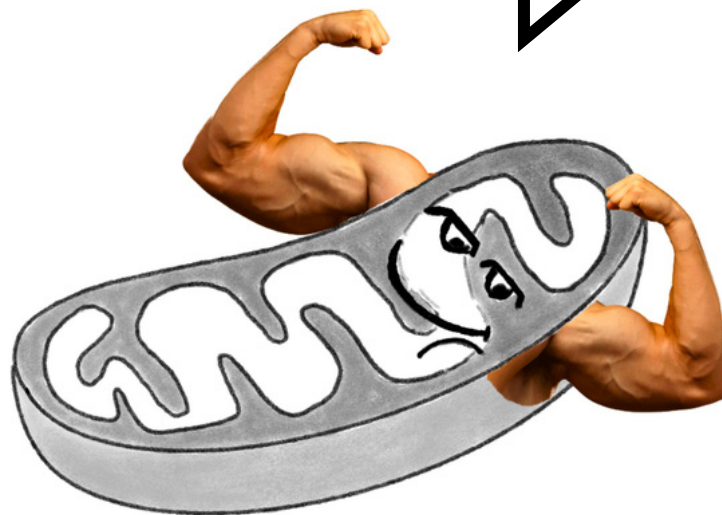
4. Y-INT & CONNECTING

→ plug in $x=0$ to find the y-int

→ plot all points & connect with a smooth curve, remember end behaviour

→ no sharp corners or breaks

**follow for
more!**



@mightochondria



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