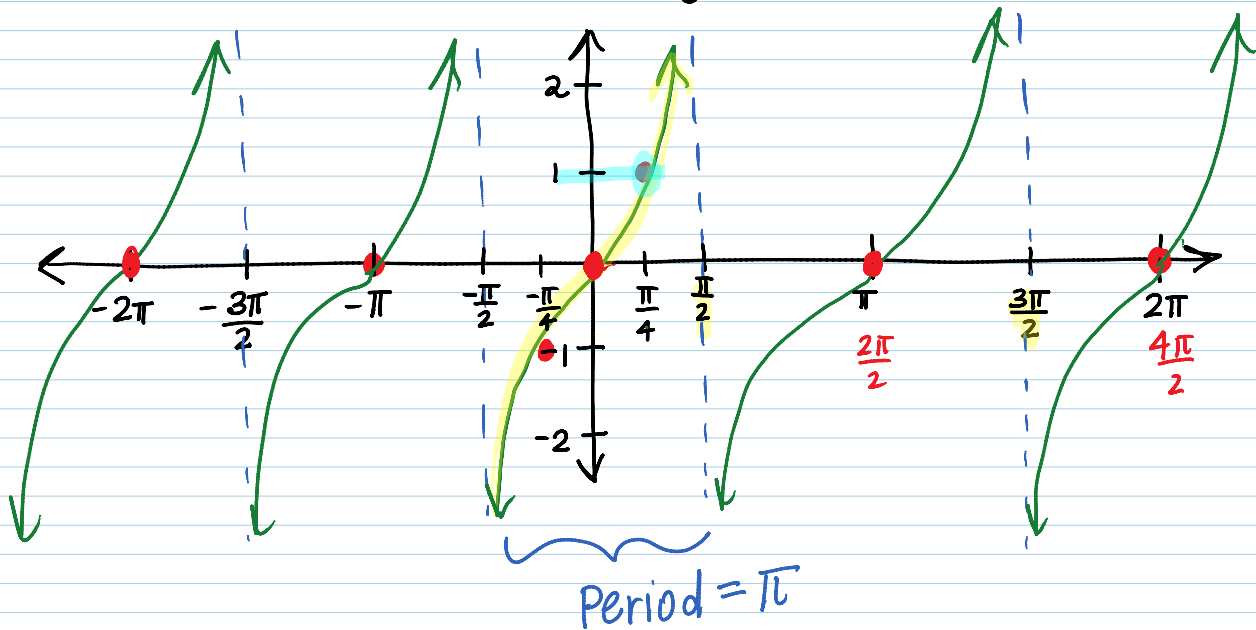


Tangent Graphs

$y = \tan x$



Key Features of tangent graphs

$y = a \tan bx$

★ Period: $\frac{\pi}{|b|}$

vertical asymptotes: $\frac{\pi}{2|b|}$

★ Halfway points: a
(between x-int. & asymptotes)

↑
odd multiples

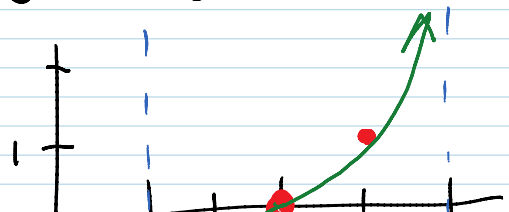
Examples:

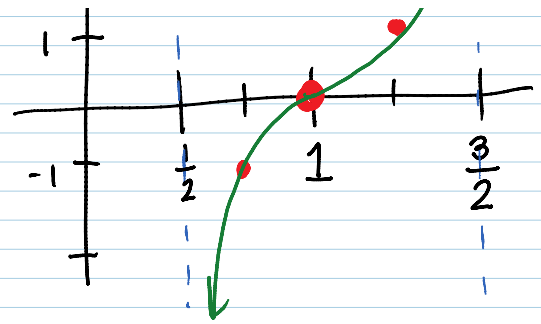
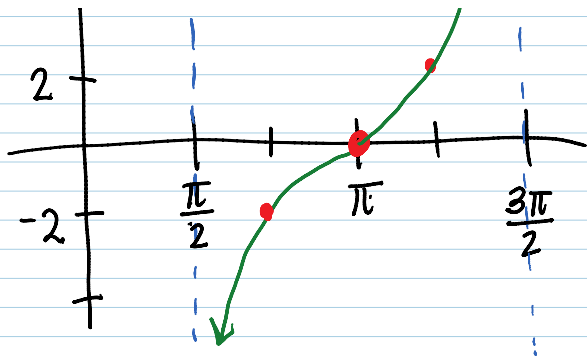
① graph $y = 2 \tan x$

$P = \frac{\pi}{|b|} = \frac{\pi}{1}$
 $P = \pi$

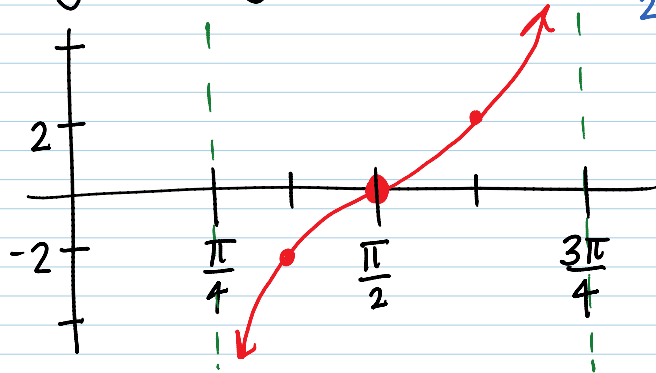


② graph $y = \tan \pi x$ $P = \frac{\pi}{\pi} = 1$

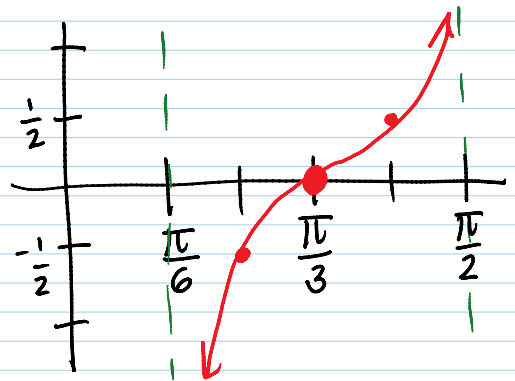




③ graph $y = 2 + \tan 2x$ $P = \frac{\pi}{2}$



④ graph $y = \frac{1}{2} \tan 3x$ $P = \frac{\pi}{3}$



EXIT SLIP!

graph one period of the following trig graphs. You must clearly label the scales (both x & y).

① $y = \frac{1}{4} \cos 4x$

② $y = \sin \pi x$

③ $y = 5 \tan \frac{1}{4} x$