

Read 5.5-5.7 and "Trig Guide to Graphing" on brewermath.com

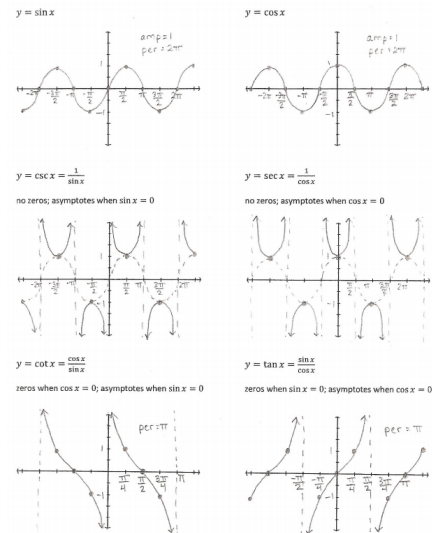
Due Wed. 12/7:

- 5.5: #55-60 all; 77-84 all
- 5.6 #1-47 odd; 49-54 all; 63-70 all

Due Wed. 12/14

- 5.7 #1-50 all; #53-64 all; 87-92 all

**Test #2 - Wed. 12/14 - Graphing + Review**



**Summary:**

For a Trigonometric function of the form  $y = af \left[ b \left( x + \frac{c}{b} \right) \right] + d$ ,

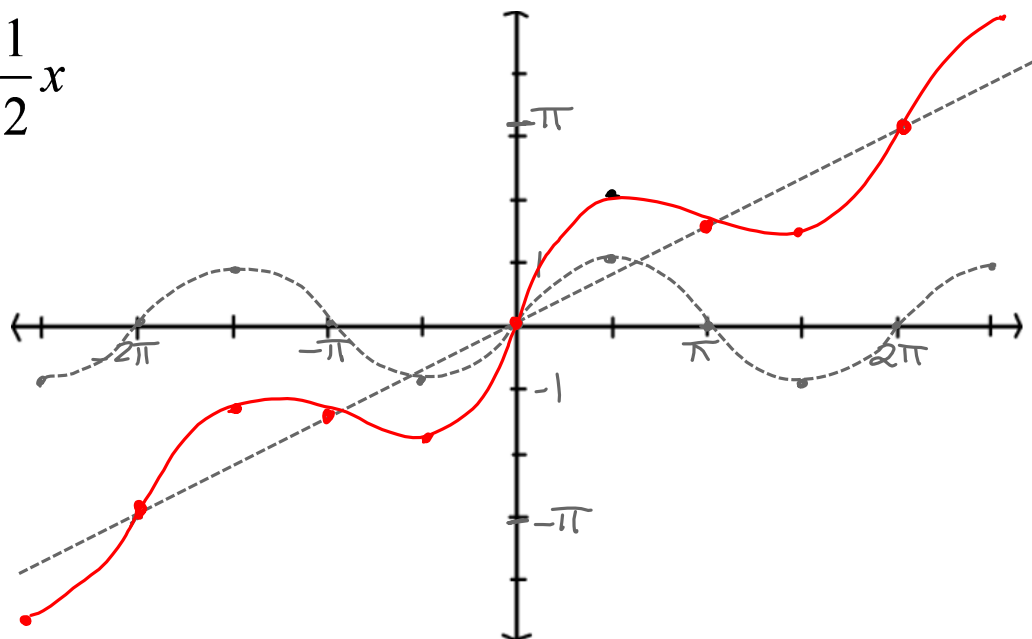
**Amplitude** =  $|a|$  (note that amplitude is always positive)

**Period** =  $\frac{\text{original period of the function } (\pi \text{ or } 2\pi)}{|b|}$

**Horizontal shift** =  $\frac{c}{b}$ , left if  $\frac{c}{b} > 0$   
~~phase shift~~  $\frac{-c}{b}$ , right if  $\frac{c}{b} < 0$

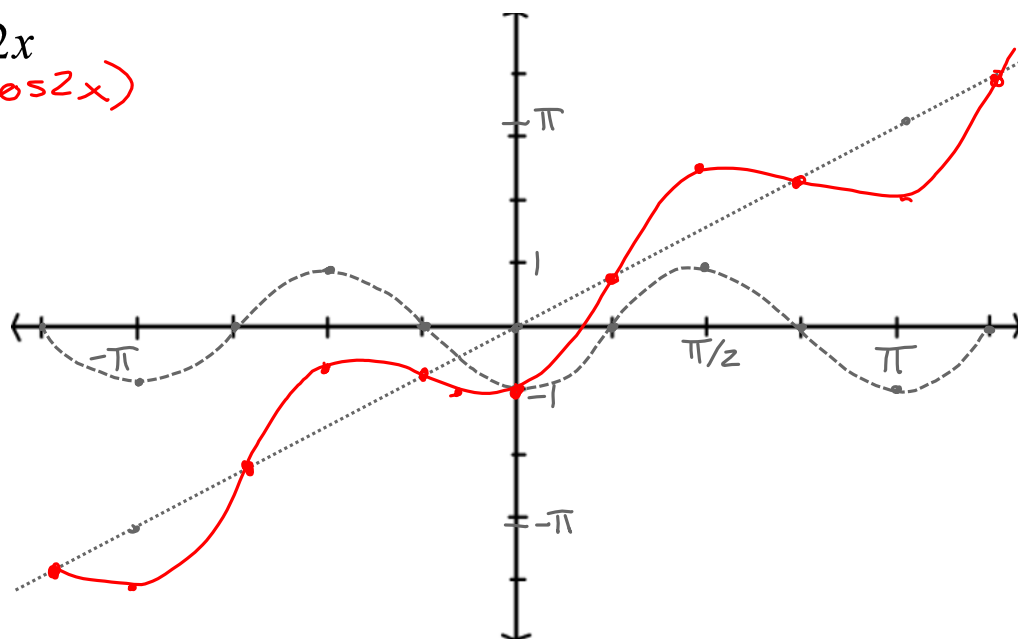
**Vertical shift** =  $d$ , up if  $d > 0$ , down if  $d < 0$

$$y = \sin x + \frac{1}{2}x$$



$$y = x - \cos 2x$$

$$= x + (-\cos 2x)$$



$$y = \underline{2\sin 2x} + \underline{\cos x}$$

amp 2 per  $\pi$       amp 1 per  $2\pi$

