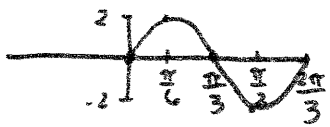
(1)



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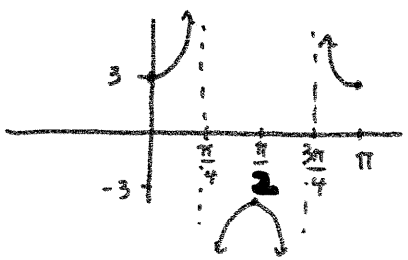

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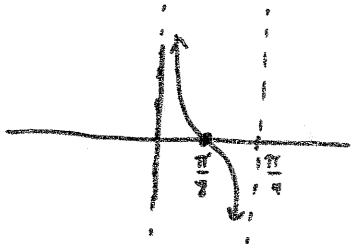

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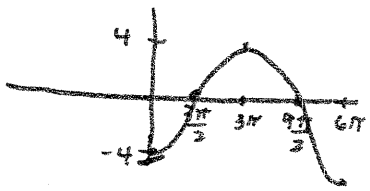

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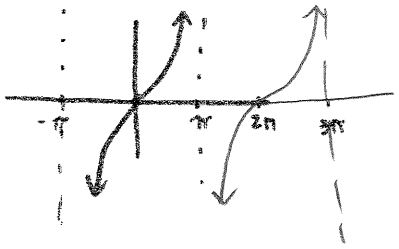

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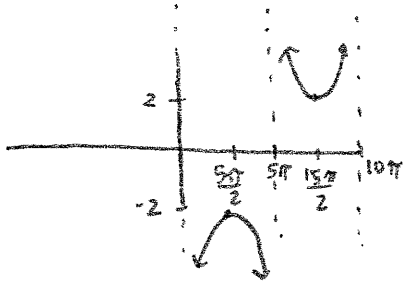

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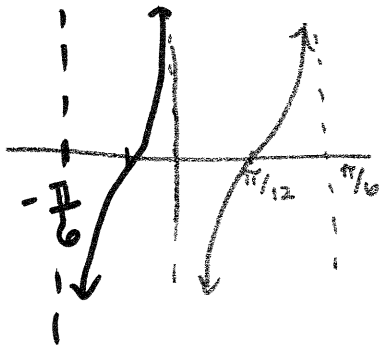

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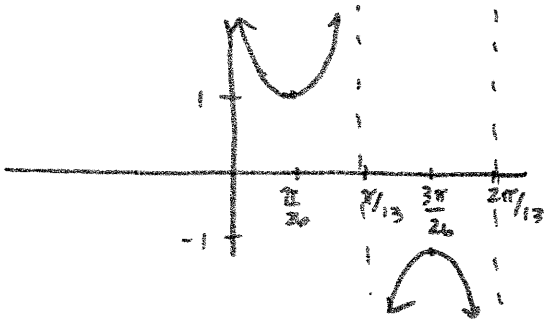

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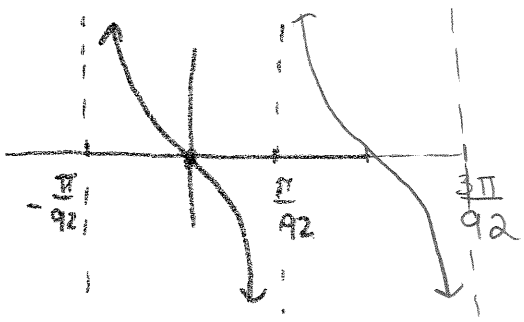

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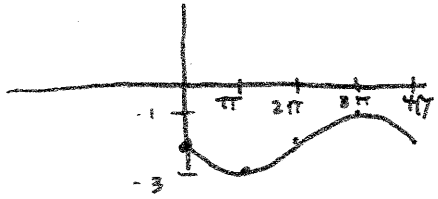

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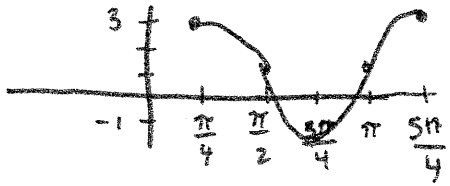

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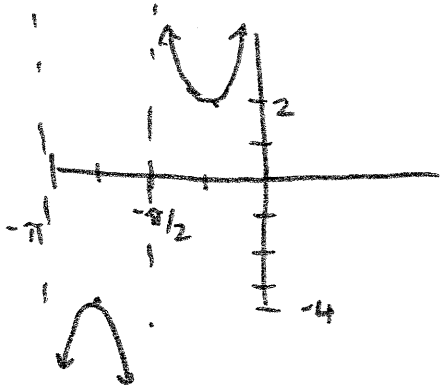

WINDOW ACTIVITY

1. Amplitude: 2 Period: $2\pi/3$ Asymptotes: —
   Zeros: $\left(\frac{\pi}{3}n, 0\right)$ Equation: $y = 2\sin 3x$ Domain: $(-\infty, \infty)$
   Range: $[-2, 2]$

2. Amplitude: — $(a = 3)$ Period: π Asymptotes: $x = \frac{\pi}{4} + \frac{\pi}{2}n$
   Zeros: — Equation: $y = 3\sec 2x$ Domain: $x \neq \frac{\pi}{4} + \frac{\pi}{2}n$
   Range: $(-\infty, -3] \cup [3, \infty)$

3. Amplitude: — Period: $\pi/4$ Asymptotes: $x = \frac{\pi}{4}n$
   Zeros: $\left(\frac{\pi}{8} + \frac{\pi}{4}n, 0\right)$ Equation: $y = \cot 4x$ Domain: $x \neq \frac{\pi}{4}n$
   Range: $(-\infty, \infty)$

4. Amplitude: 4 Period: 6π Asymptotes: —
   Zeros: $\left(\frac{3\pi}{2} + 3\pi n, 0\right)$ Equation: $y = -4\cos\frac{x}{3}$ Domain: $(-\infty, \infty)$
   Range: $[-4, 4]$ $\frac{2\pi}{B} = 6\pi$ $B = \frac{1}{3}$

5. Amplitude: — Period: 2π Asymptotes: $x = 2\pi n + \pi$
   Zeros: $(2\pi n, 0)$ Equation: $y = \tan\frac{x}{2}$ Domain: $x \neq \pi n$
   Range: $(-\infty, \infty)$

6. Amplitude: — $(a = -2)$ Period: 10π Asymptotes: $x = 5\pi n$
   Zeros: — Equation: $y = -2\csc\frac{x}{5}$ Domain: $x \neq 5\pi n$
   Range: $(-\infty, -2] \cup [2, \infty)$

7. Amplitude: — Period: $\pi/6$ Asymptotes: $x = \frac{\pi}{6}n$
   Zeros: $\left(\frac{\pi}{12} + \frac{\pi}{6}n, 0\right)$ Equation: $y = -\cot 6x$ Domain: $x \neq \frac{\pi}{6}n$
   Range: $(-\infty, \infty)$

8. Amplitude: — $(a = 1)$ Period: $2\pi/13$ Asymptotes: $x = \frac{\pi}{13}n$
   Zeros: — Equation: $y = \csc 13x$ Domain: $x \neq \frac{\pi}{13}n$
   Range: $(-\infty, -1] \cup [1, \infty)$

9. Amplitude: — Period: $\frac{\pi}{46}$ Asymptotes: $x = \frac{\pi}{92} + \frac{\pi}{46}n$
   Zeros: $\left(\frac{\pi}{46}n, 0\right)$ Equation: $y = -\tan 46x$ Domain: $x \neq \frac{\pi}{92} + \frac{\pi}{46}n$
   Range: $(-\infty, \infty)$

10. Amplitude: 1 Period: 4π Asymptotes: —
    Zeros: — Equation: $y = -\sin\frac{x}{2} - 2$ Domain: $(-\infty, \infty)$
    Range: $[-3, -1]$

11. Amplitude: 2 Period: π Asymptotes: —
    Zeros: don't worry about it Equation: $y = 2\cos 2(x - \pi/4) + 1$ Domain: $(-\infty, \infty)$
    Range: $[-1, 3]$

12. Amplitude: — $(a = 3)$ Period: 4π Asymptotes: $x = \frac{\pi}{2}n$
    Zeros: — Equation: $y = -3\csc 2(x - \pi)$ Domain: $x \neq \frac{\pi}{2}n$
    Range: $(-\infty, -4] \cup [2, \infty)$