

## Exercises

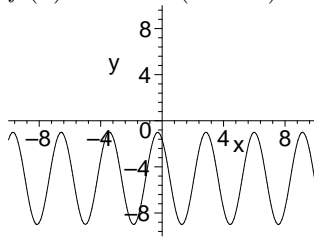
Graph these functions!

- $f(x) = -4 \sin(2x - 1) - 5$
- $f(x) = 3 \tan(2x + 2) - 4$
- $f(x) = \cos(2\pi x + 5) + 5$
- $f(x) = 2 \tan(x + 2) - 4$
- $f(x) = 3 \sec(2\pi x + 3) + 2$
- $f(x) = -2 \tan(2\pi x - 5) - 2$
- $f(x) = 2 \sin(2x + 1) + 2$
- $f(x) = -4 \cot(2x + 1) - 5$
- $f(x) = 2 \tan(x + 4)$
- $f(x) = -3 \cos(x + 4)$
- $f(x) = 4 \sec(2\pi x - 1) + 1$
- $f(x) = -2 \sec(x + 1)$
- $f(x) = 4 \cot(2\pi x + 2) - 5$
- $f(x) = \sec(2x + 4) - 5$
- $f(x) = -\sin(2x - 3)$
- $f(x) = 4 \cos(x - 3) - 3$
- $f(x) = -2 \cot(x + 1)$
- $f(x) = -3 \sec(x - 4) - 2$
- $f(x) = 4 \sin(x - 5) + 5$
- $f(x) = 3 \cot(x - 5) + 1$
- $f(x) = -\cot(2x + 3) + 1$
- $f(x) = -2 \cot(\pi x + 3) + 2$
- $f(x) = -\sin(x) + 3$
- $f(x) = -4 \cot(\pi x + 4) + 2$
- $f(x) = 4 \cos(2x) + 5$
- $f(x) = 2 \tan(2x - 3)$
- $f(x) = -3 \tan(\pi x + 3) + 5$
- $f(x) = -4 \tan(x - 4) - 3$
- $f(x) = 3 \tan(\pi x + 1) + 5$
- $f(x) = -\sec(x - 5) + 5$
- $f(x) = 3 \cos(x - 1) - 1$
- $f(x) = -4 \sin(2x + 1) + 2$
- $f(x) = -3 \sec(x + 2) + 5$
- $f(x) = -3 \cos(x - 3) + 3$
- $f(x) = -2 \sin(x) + 5$
- $f(x) = -2 \cot(\pi x - 2) - 3$
- $f(x) = -3 \sec(2x - 4) - 2$
- $f(x) = -3 \sec(x + 1) - 1$
- $f(x) = 4 \sec(x - 2) - 3$
- $f(x) = -2 \cos(x - 4) - 5$
- $f(x) = -3 \cos(2\pi x + 3) + 2$
- $f(x) = 4 \cos(2x - 2) - 5$
- $f(x) = 2 \cot(x) - 2$
- $f(x) = -\tan(x + 1) + 3$
- $f(x) = 4 \cos(2x) + 4$
- $f(x) = 4 \cos(2\pi x - 4) + 4$
- $f(x) = 3 \cot(x - 3) + 5$
- $f(x) = \cos(2x) - 2$
- $f(x) = -\sec(x) - 3$
- $f(x) = -4 \sin(2x) + 1$
- $f(x) = 3 \sec(x - 3)$
- $f(x) = \cos(2x) - 3$
- $f(x) = \cos(2x + 1) - 3$

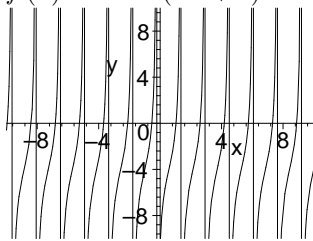
54.  $f(x) = -3 \tan(\pi x - 5)$   
55.  $f(x) = -\cos(2x + 3) - 3$   
56.  $f(x) = \cot(x + 4) - 2$   
57.  $f(x) = 2 \cot(2x - 2) + 1$   
58.  $f(x) = -2 \cos(x - 3) + 3$   
59.  $f(x) = -\sec(2x + 5) + 5$   
60.  $f(x) = -3 \cos(x - 2) - 5$   
61.  $f(x) = 2 \cot(x - 3) + 2$   
62.  $f(x) = -3 \sin(2x - 1)$   
63.  $f(x) = \tan(x - 2) - 2$   
64.  $f(x) = 2 \sec(2x - 5) + 3$   
65.  $f(x) = -3 \sec(2x + 2) + 5$   
66.  $f(x) = \cos(x + 1) + 3$   
67.  $f(x) = 3 \cos(x + 5)$   
68.  $f(x) = 2 \cot(2\pi x + 1) - 5$   
69.  $f(x) = \sin(x) - 3$   
70.  $f(x) = 2 \sin(x + 3) + 4$   
71.  $f(x) = -4 \cot(x + 5) + 3$   
72.  $f(x) = 3 \cot(x + 1) + 1$   
73.  $f(x) = -\sec(2x) + 4$   
74.  $f(x) = 4 \tan(x - 1) - 2$   
75.  $f(x) = -2 \cot(x + 3) + 3$   
76.  $f(x) = -\cot(2\pi x - 3) - 3$   
77.  $f(x) = 4 \sec(x + 3)$   
78.  $f(x) = -\tan(2x - 3) + 5$   
79.  $f(x) = \cos(2x + 4) + 2$   
80.  $f(x) = 3 \sec(2x) - 3$   
81.  $f(x) = 4 \cos(x - 2) + 2$   
82.  $f(x) = 3 \cot(2x) + 4$   
83.  $f(x) = \cot(x + 5) - 1$   
84.  $f(x) = 3 \cot(x + 2) - 4$   
85.  $f(x) = \tan(x + 4) - 4$   
86.  $f(x) = -3 \sin(x - 3) - 4$   
87.  $f(x) = -4 \cos(2x + 4) - 4$   
88.  $f(x) = -3 \cos(2x - 1) + 1$   
89.  $f(x) = -2 \sin(2x + 2) - 1$   
90.  $f(x) = 2 \cos(2x) - 5$   
91.  $f(x) = 3 \sin(x - 5) + 1$   
92.  $f(x) = -2 \cos(2x - 2) + 3$   
93.  $f(x) = 4 \tan(2x - 4) + 2$   
94.  $f(x) = \sin(2x + 1) - 5$   
95.  $f(x) = -4 \cot(x + 5) - 5$   
96.  $f(x) = -3 \tan(x + 2) + 1$   
97.  $f(x) = -3 \cos(x - 1)$   
98.  $f(x) = 4 \cos(2x + 1) + 2$   
99.  $f(x) = 3 \sin(2x + 3) - 4$   
100.  $f(x) = 3 \cot(\pi x - 5) + 3$

## Solutions

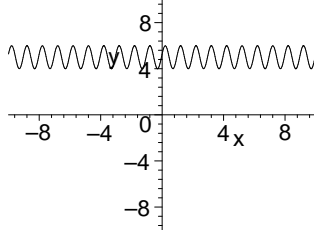
1.  $f(x) = -4 \sin(2x - 1) - 5$



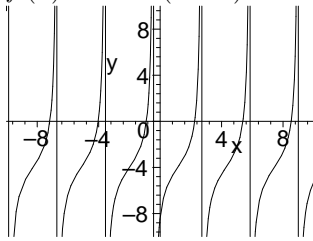
2.  $f(x) = 3 \tan(2x + 2) - 4$



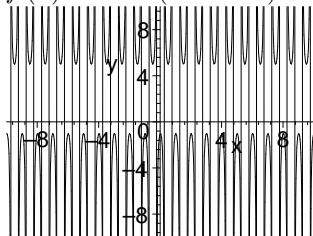
3.  $f(x) = \cos(2\pi x + 5) + 5$



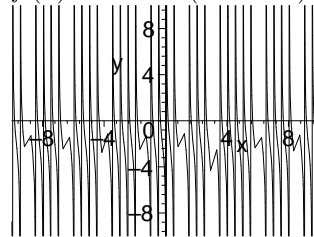
4.  $f(x) = 2 \tan(x + 2) - 4$



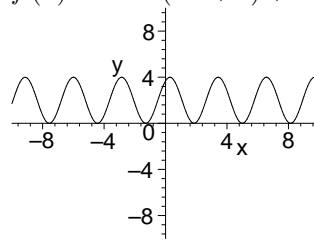
5.  $f(x) = 3 \sec(2\pi x + 3) + 2$



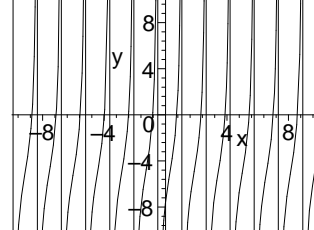
6.  $f(x) = -2 \tan(2\pi x - 5) - 2$



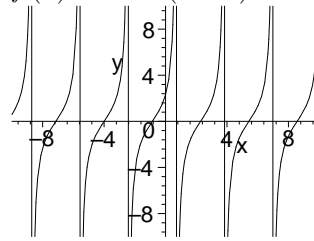
7.  $f(x) = 2 \sin(2x + 1) + 2$



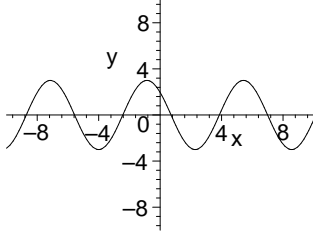
8.  $f(x) = -4 \cot(2x + 1) - 5$



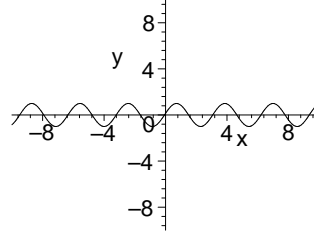
9.  $f(x) = 2 \tan(x + 4)$



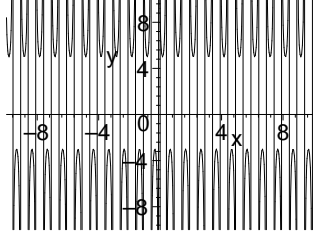
10.  $f(x) = -3 \cos(x + 4)$



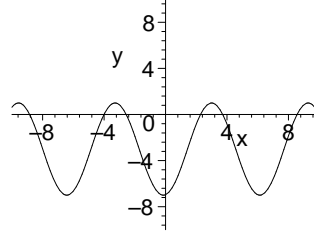
15.  $f(x) = -\sin(2x - 3)$



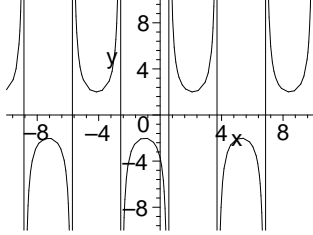
11.  $f(x) = 4 \sec(2\pi x - 1) + 1$



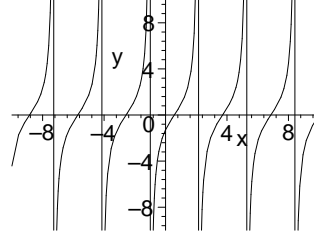
16.  $f(x) = 4 \cos(x - 3) - 3$



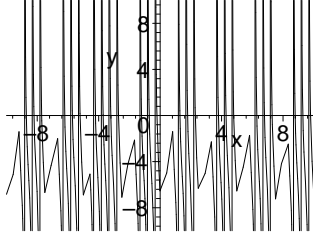
12.  $f(x) = -2 \sec(x + 1)$



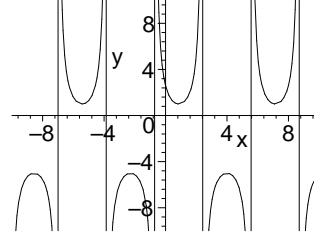
17.  $f(x) = -2 \cot(x + 1)$



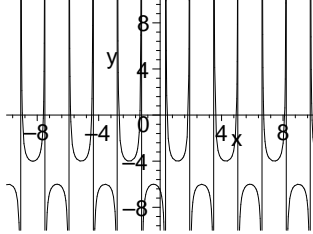
13.  $f(x) = 4 \cot(2\pi x + 2) - 5$



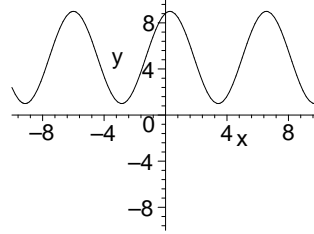
18.  $f(x) = -3 \sec(x - 4) - 2$



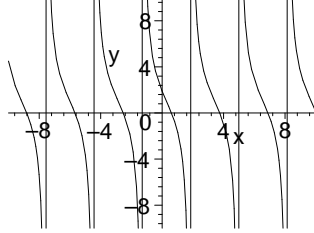
14.  $f(x) = \sec(2x + 4) - 5$



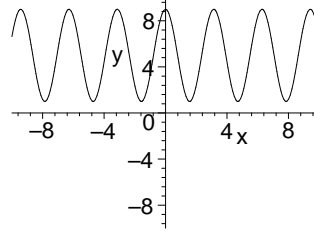
19.  $f(x) = 4 \sin(x - 5) + 5$



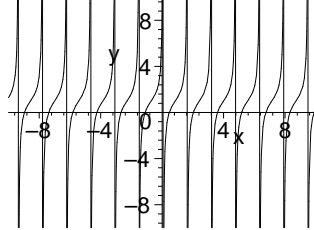
20.  $f(x) = 3 \cot(x - 5) + 1$



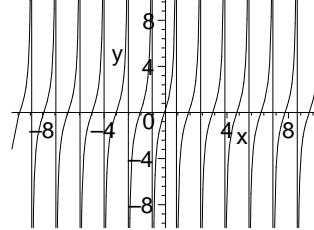
25.  $f(x) = 4 \cos(2x) + 5$



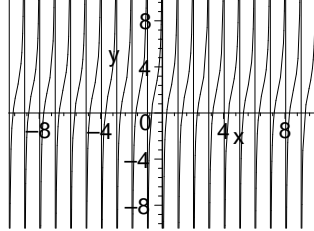
21.  $f(x) = -\cot(2x + 3) + 1$



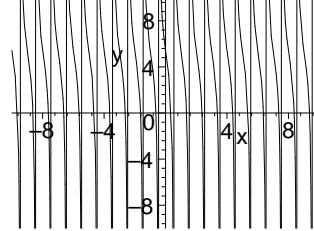
26.  $f(x) = 2 \tan(2x - 3)$



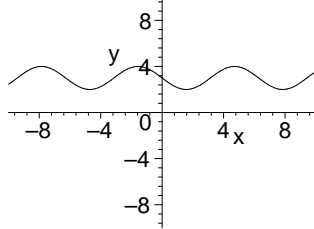
22.  $f(x) = -2 \cot(\pi x + 3) + 2$



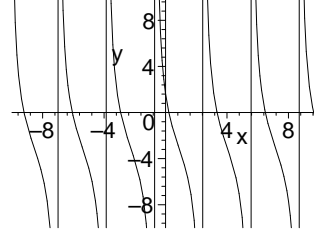
27.  $f(x) = -3 \tan(\pi x + 3) + 5$



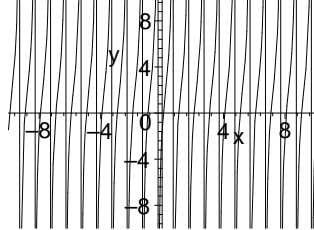
23.  $f(x) = -\sin(x) + 3$



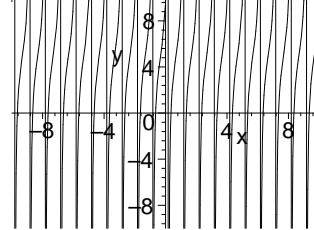
28.  $f(x) = -4 \tan(x - 4) - 3$



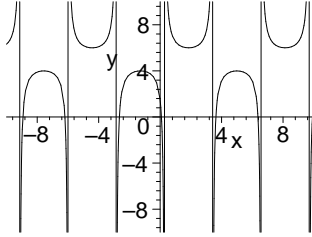
24.  $f(x) = -4 \cot(\pi x + 4) + 2$



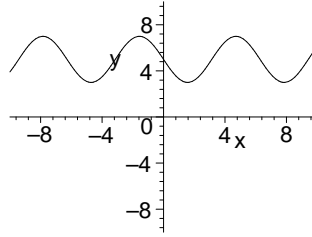
29.  $f(x) = 3 \tan(\pi x + 1) + 5$



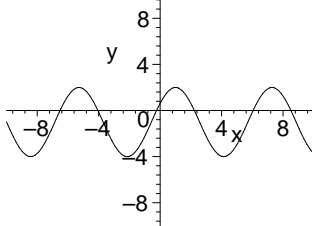
30.  $f(x) = -\sec(x - 5) + 5$



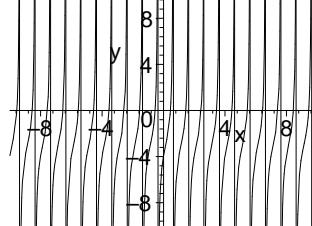
35.  $f(x) = -2 \sin(x) + 5$



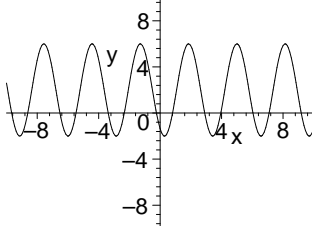
31.  $f(x) = 3 \cos(x - 1) - 1$



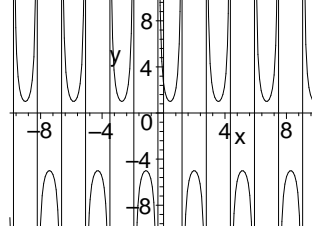
36.  $f(x) = -2 \cot(\pi x - 2) - 3$



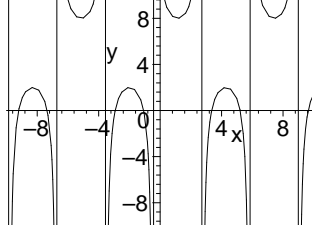
32.  $f(x) = -4 \sin(2x + 1) + 2$



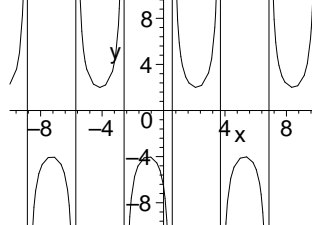
37.  $f(x) = -3 \sec(2x - 4) - 2$



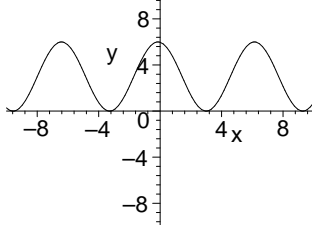
33.  $f(x) = -3 \sec(x + 2) + 5$



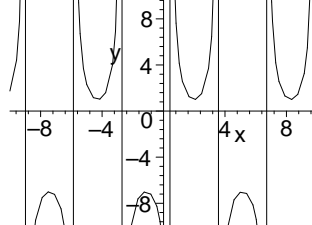
38.  $f(x) = -3 \sec(x + 1) - 1$



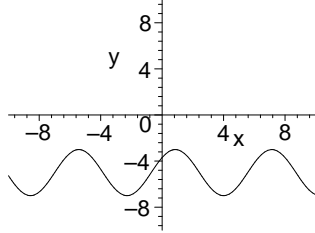
34.  $f(x) = -3 \cos(x - 3) + 3$



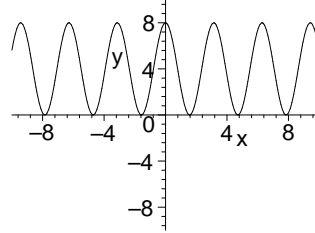
39.  $f(x) = 4 \sec(x - 2) - 3$



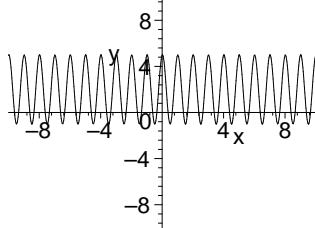
40.  $f(x) = -2 \cos(x - 4) - 5$



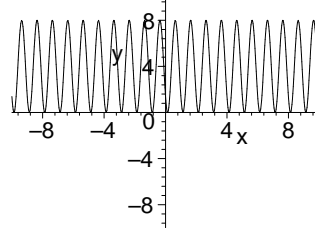
45.  $f(x) = 4 \cos(2x) + 4$



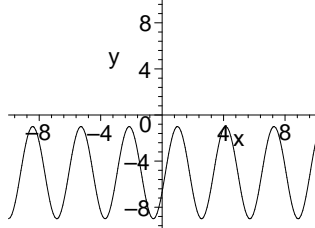
41.  $f(x) = -3 \cos(2\pi x + 3) + 2$



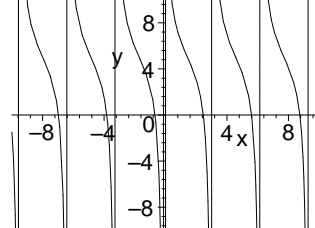
46.  $f(x) = 4 \cos(2\pi x - 4) + 4$



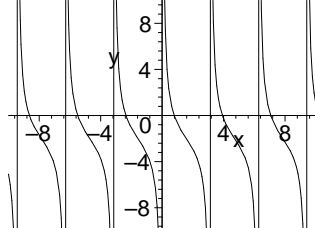
42.  $f(x) = 4 \cos(2x - 2) - 5$



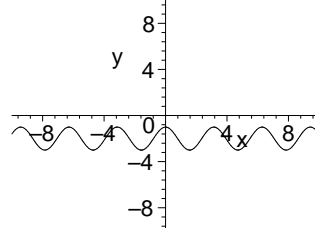
47.  $f(x) = 3 \cot(x - 3) + 5$



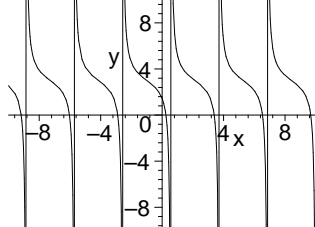
43.  $f(x) = 2 \cot(x) - 2$



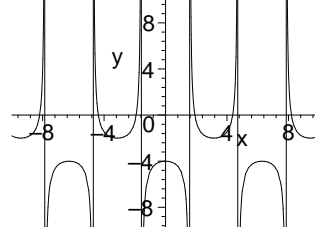
48.  $f(x) = \cos(2x) - 2$



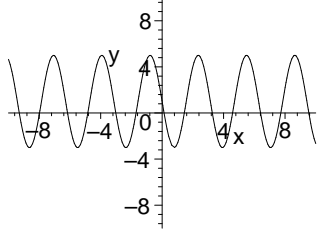
44.  $f(x) = -\tan(x + 1) + 3$



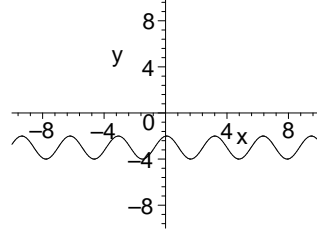
49.  $f(x) = -\sec(x) - 3$



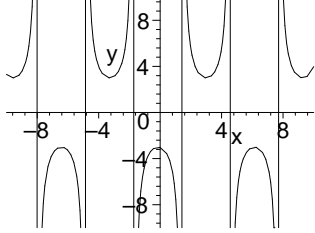
50.  $f(x) = -4 \sin(2x) + 1$



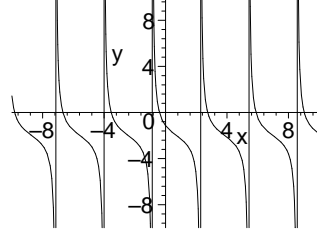
55.  $f(x) = -\cos(2x + 3) - 3$



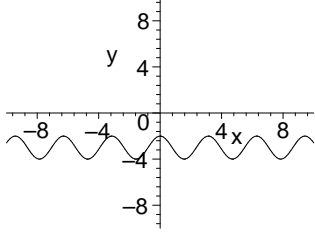
51.  $f(x) = 3 \sec(x - 3)$



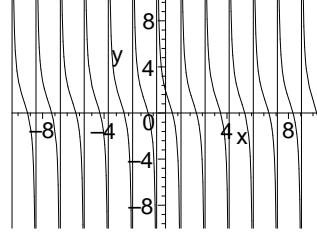
56.  $f(x) = \cot(x + 4) - 2$



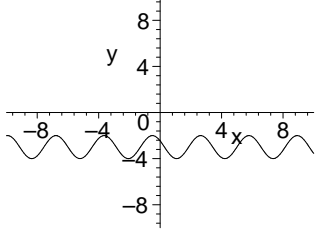
52.  $f(x) = \cos(2x) - 3$



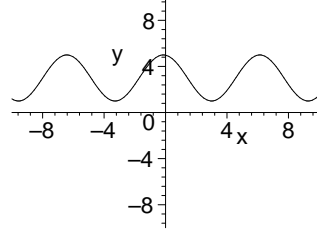
57.  $f(x) = 2 \cot(2x - 2) + 1$



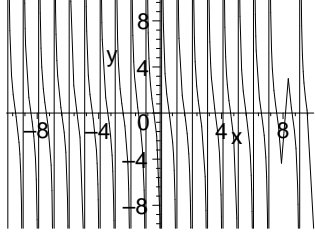
53.  $f(x) = \cos(2x + 1) - 3$



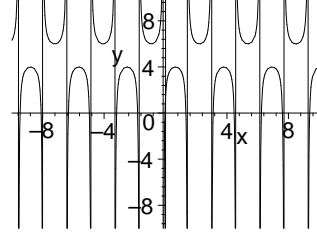
58.  $f(x) = -2 \cos(x - 3) + 3$



54.  $f(x) = -3 \tan(\pi x - 5)$

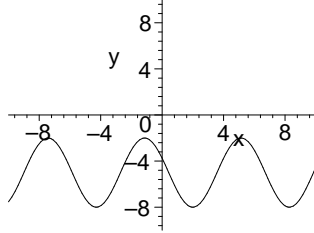


59.  $f(x) = -\sec(2x + 5) + 5$

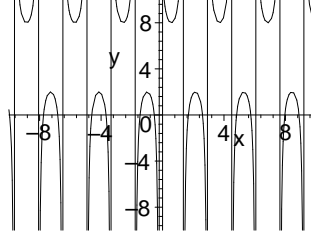




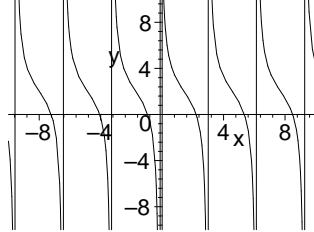
60.  $f(x) = -3 \cos(x - 2) - 5$



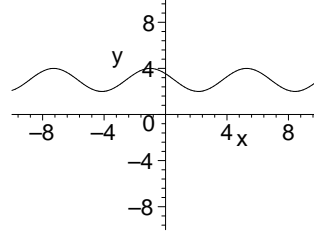
65.  $f(x) = -3 \sec(2x + 2) + 5$



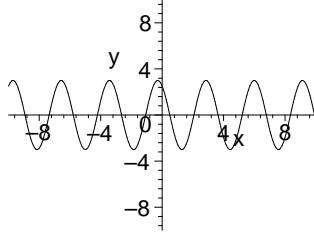
61.  $f(x) = 2 \cot(x - 3) + 2$



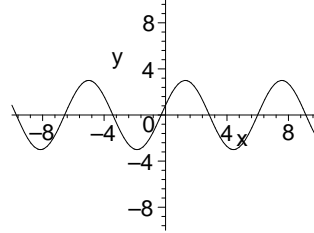
66.  $f(x) = \cos(x + 1) + 3$



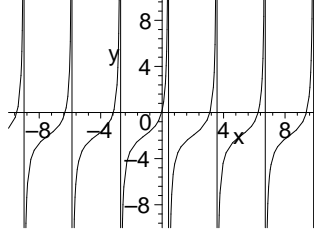
62.  $f(x) = -3 \sin(2x - 1)$



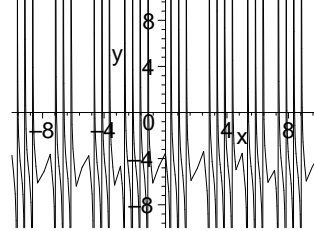
67.  $f(x) = 3 \cos(x + 5)$



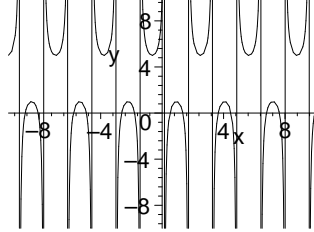
63.  $f(x) = \tan(x - 2) - 2$



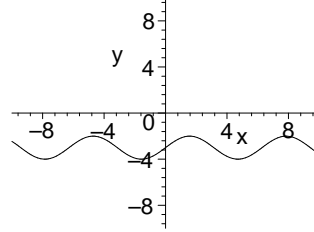
68.  $f(x) = 2 \cot(2\pi x + 1) - 5$



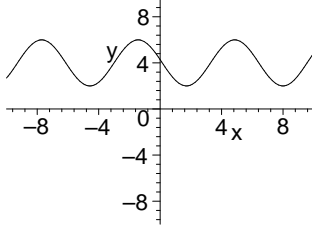
64.  $f(x) = 2 \sec(2x - 5) + 3$



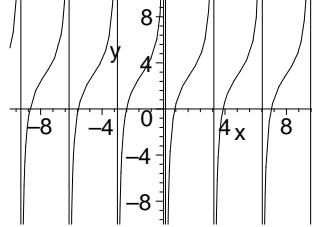
69.  $f(x) = \sin(x) - 3$



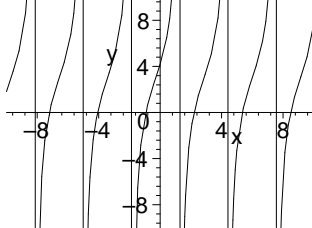
70.  $f(x) = 2 \sin(x + 3) + 4$



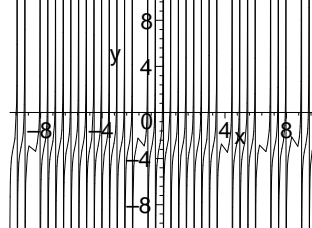
75.  $f(x) = -2 \cot(x + 3) + 3$



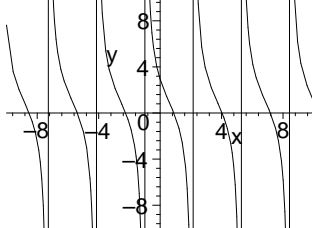
71.  $f(x) = -4 \cot(x + 5) + 3$



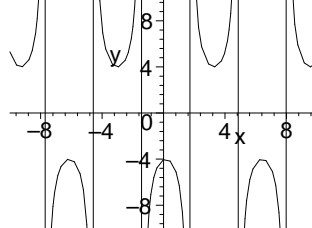
76.  $f(x) = -\cot(2\pi x - 3) - 3$



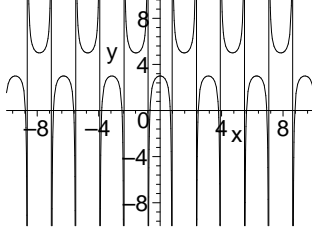
72.  $f(x) = 3 \cot(x + 1) + 1$



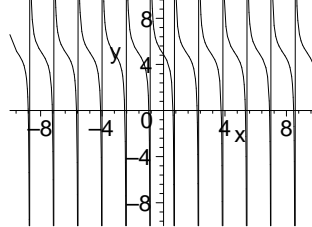
77.  $f(x) = 4 \sec(x + 3)$



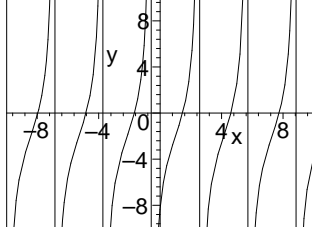
73.  $f(x) = -\sec(2x) + 4$



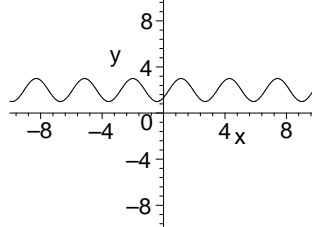
78.  $f(x) = -\tan(2x - 3) + 5$



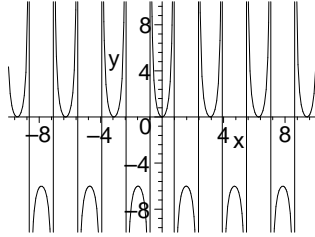
74.  $f(x) = 4 \tan(x - 1) - 2$



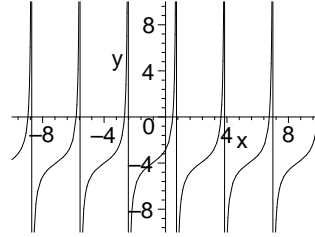
79.  $f(x) = \cos(2x + 4) + 2$



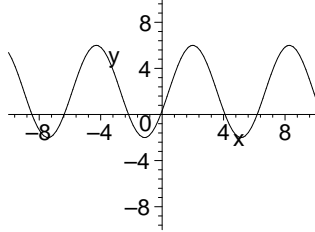
80.  $f(x) = 3 \sec(2x) - 3$



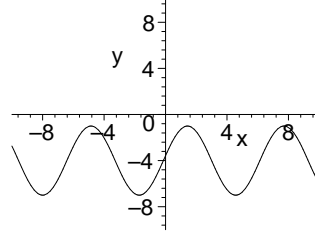
85.  $f(x) = \tan(x + 4) - 4$



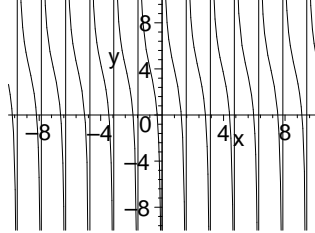
81.  $f(x) = 4 \cos(x - 2) + 2$



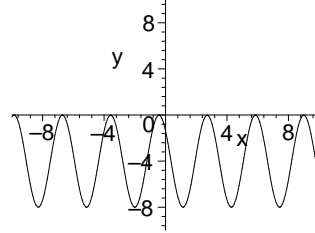
86.  $f(x) = -3 \sin(x - 3) - 4$



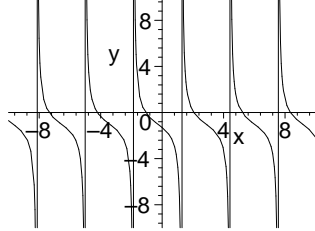
82.  $f(x) = 3 \cot(2x) + 4$



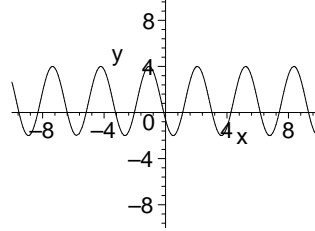
87.  $f(x) = -4 \cos(2x + 4) - 4$



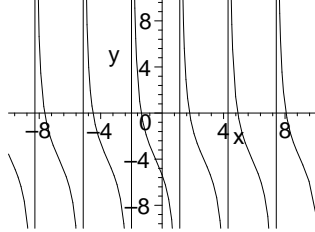
83.  $f(x) = \cot(x + 5) - 1$



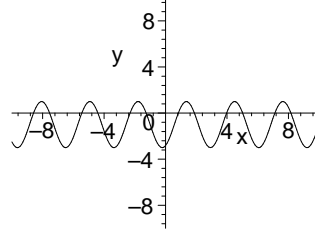
88.  $f(x) = -3 \cos(2x - 1) + 1$



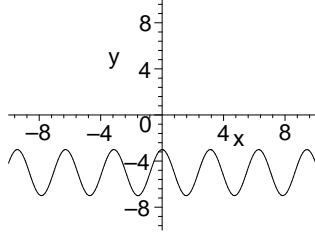
84.  $f(x) = 3 \cot(x + 2) - 4$



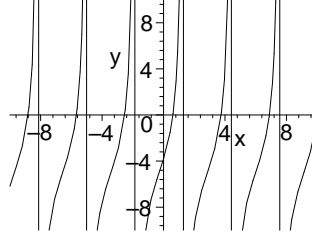
89.  $f(x) = -2 \sin(2x + 2) - 1$



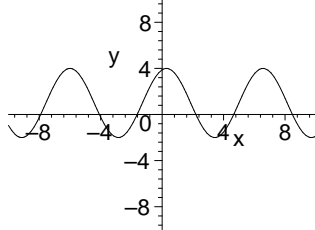
90.  $f(x) = 2 \cos(2x) - 5$



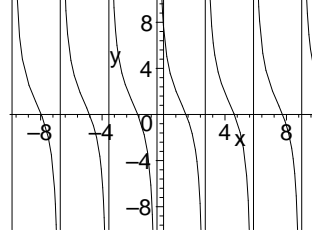
95.  $f(x) = -4 \cot(x + 5) - 5$



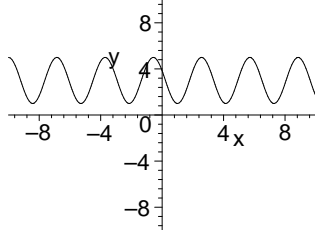
91.  $f(x) = 3 \sin(x - 5) + 1$



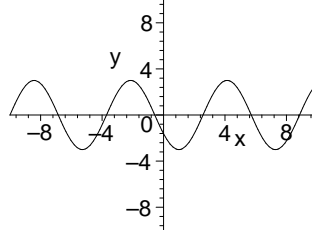
96.  $f(x) = -3 \tan(x + 2) + 1$



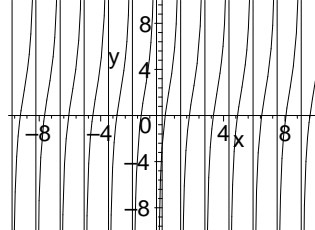
92.  $f(x) = -2 \cos(2x - 2) + 3$



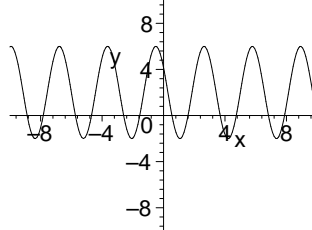
97.  $f(x) = -3 \cos(x - 1)$



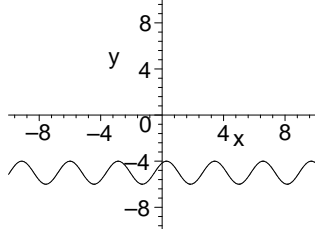
93.  $f(x) = 4 \tan(2x - 4) + 2$



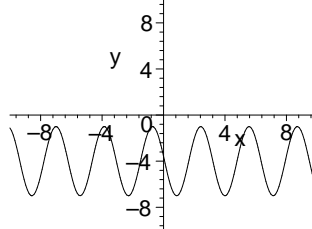
98.  $f(x) = 4 \cos(2x + 1) + 2$



94.  $f(x) = \sin(2x + 1) - 5$



99.  $f(x) = 3 \sin(2x + 3) - 4$



100.  $f(x) = 3 \cot(\pi x - 5) + 3$

