Give the amplitude, period, phase shift, and vertical shift for each function. Graph one period. Label any vertical asymptotes.

\[ y = 2 \csc(2x - \frac{\pi}{2}) \]

\[ y = 3 \sec 4(x + \frac{\pi}{8}) + 2 \]

\[ y = -1 + 2 \tan \left( \frac{\pi}{2} (x - 2) \right) \]

\[ y = \cot \left( 2x - \frac{\pi}{2} \right) - 1 \]