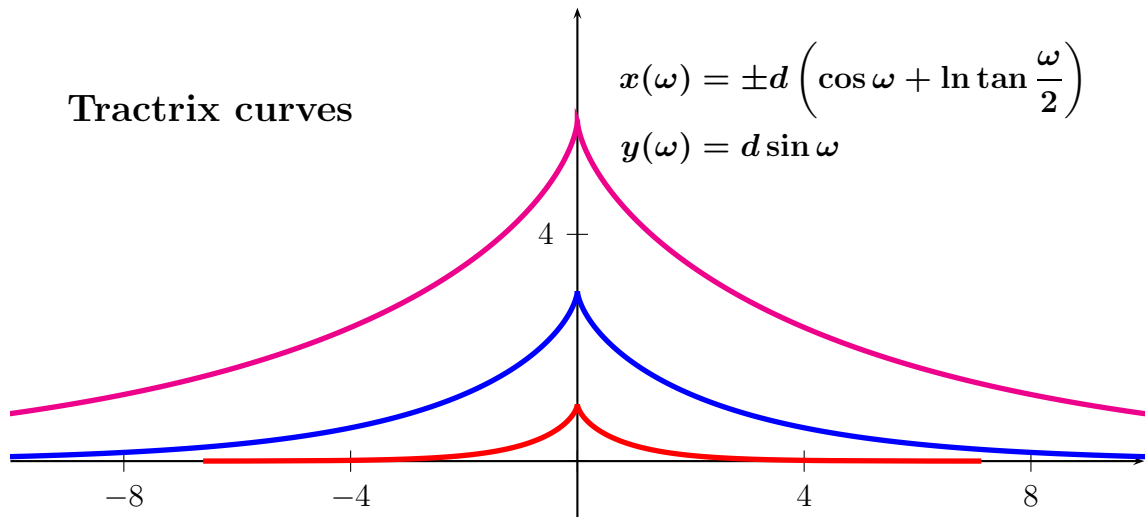


## Tractrix curves



```

\usepackage{amsmath,pstricks-add}
\makeatletter
\define@key[psset]{pstricks-add}{tractrixD}{\def\pst@tractrixD{#1 }}
\psset{tractrixD=1}
\makeatother
\pagestyle{empty}
\parindent=0pt
\begin{document}

\makeatletter
\psset{unit=0.75}
\begin{pspicture*}(-10,-1)(10,8)
  \psgrid[subgriddiv=0,griddots=5,gridlabels=0pt,gridwidth=.3pt](-10,-1)(10,8)
  \psaxes[Dx=4,Dy=4]{->}(0,0)(-10,-1)(10,8)
  \psset{plotstyle=curve,linewidth=2pt,plotpoints=400}
  \parametricplot[linecolor=red]{0.001}{3.141}{%
    t RadtoDeg /omega exch def
    omega cos omega 2 div Tan ln add \pst@tractrixD mul
    omega sin \pst@tractrixD mul}
  \parametricplot[linecolor=blue,tractrixD=3]{0.01}{3.141}{%
    t RadtoDeg /omega exch def
    omega cos omega 2 div Tan ln add \pst@tractrixD mul
    omega sin \pst@tractrixD mul}
  \parametricplot[linecolor=magenta,tractrixD=6]{0.01}{3.141}{%
    t RadtoDeg /omega exch def

```

```

    omega cos omega 2 div Tan ln add \pst@tractrixD mul
    omega sin \pst@tractrixD mul}
\lput[bl](-9,6){\bfseries\large Tractrix curves}
\lput[tr](9,8){\parbox{5cm}{\boldmath%
\begin{align*}
x(\omega) &= \pm d \left( \cos \omega + \ln \tan \frac{\omega}{2} \right) \\
y(\omega) &= d \sin \omega
\end{align*}}}
\end{pspicture*}
\makeatother

```