

Find an orthogonal trajectories of the curves of each of the following families and show by using graphing utilities.

1.  $x^2 - y^2 = c$

2.  $x = cy^2$

3.  $x^2 + y^2 = cx$

4.  $y = e^{cx}$

5.  $y = x - 1 + ce^{-x}$

6.  $xy = c$

7.  $x = \frac{y^2}{4} + \frac{c}{y^2}$

8.  $y = (x - c)^2$

9.  $y^2 = x^2 + cx$

10.  $x^2 + y^2 = 1 + 2cy$