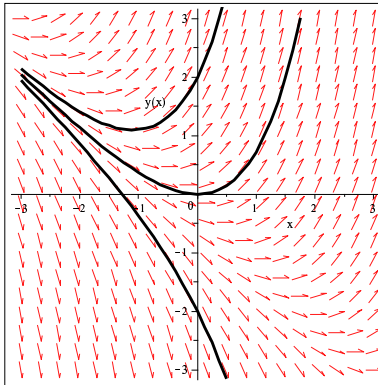


1. (b) (c)



(Note that the default grid of points used by Maple to generate its plot of the direction field uses more finely spaced points than the integer grid specified in the problem, so this shows more detail. In the solution you hand in, follow the given directions – do not try to reproduce this picture!)

(d) $y(1) \approx 2.97664$

3. (a) $y = \arcsin \left(A \sqrt{\left| \frac{x+1}{x+3} \right|} \right)$

(c) $y = 4e^{x^2}$

(e) $y = -\frac{1}{x^2 + x^3 - 1}$

5. (a) $T(25) \approx 13.2^\circ$

6. (a) $\frac{dP}{dt} = -k\sqrt{P}$

(c) The population will disappear entirely after 20 weeks.