8. Gyak.
Szétválaszthatóra visszavezethető egyenletek

1. Homogén $y' = f\left(\frac{y}{x}\right)$
   (a) $(5x - 7y) - (x + y)y' = 0,\ y(1) = 1$
   (b) $xy' = x\sin\left(\frac{y}{x}\right) + y,\ y\left(\frac{1}{2}\right) = \frac{\pi}{4}$
   (c) $y' = \frac{y^2 - x^2}{xy}$
   (d) $3xy^2y' = x^3 + 3y^3,\ y(2) = 1$

2. $y' = f(ax + by + c)$
   (a) $y' = -\frac{5}{2} + \sin(5x + 2y)$
   (b) $y' = \tan(y - x) + 1$
   (c) $y' = \sqrt{x + 2y + 1} + 2x + 4y + 2$
   (d) $y' = \frac{1}{3x - 2y + 2}$
   (e) $y' = e^{2y - 6x + 1} + 3,\ y(0) = 0$
   (f) $y' = 4 + \cos(-5x + 2y + 3),\ y(1) = 1$

3. $y' = f\left(\frac{ax + by + c}{\alpha x + \beta y + \gamma}\right)$
   (a) $y' = \frac{7x - 5y + 45}{9x + 21y + 3}$
   (b) $y' = \frac{x + y - 1}{2x + 2y - 1}$
   (c) $(x + y)^2y' = (x + y + 2)^2$

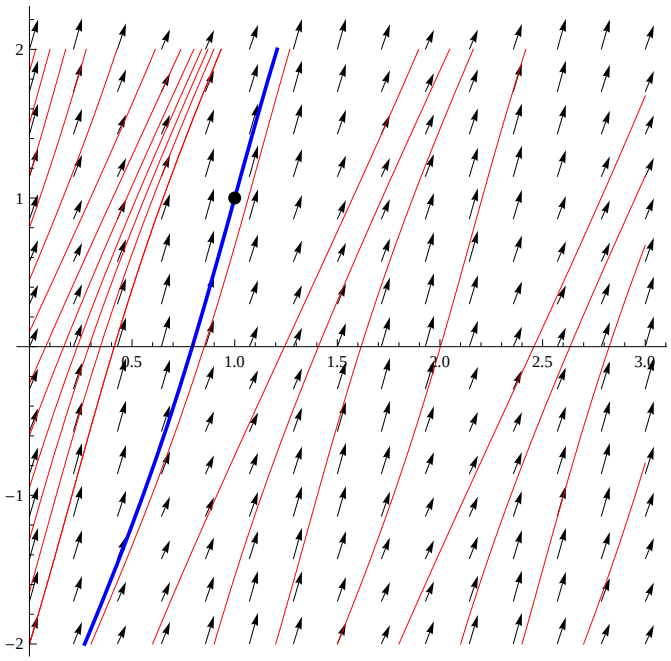

Figure 1: $y' = 4 + \cos(-5x + 2y + 3)$