Приклад КР за темою ДР-1.

1) $y' = \dfrac{x}{2} - \dfrac{xy}{2(1-x^2)}$; $y(0) = \dfrac{2}{3}$

2) $(y-1)e^x dx - (e^{2x}+4) \cdot y \, dy = 0$

3) $x \cdot y' = \sqrt{2x^2 + y^2} + y$

4) $2(y' + y) = xy^2$

5) $x^4 y'' + x^3 y' = 4$;

6) $\cos^2 y \cdot y'' - \operatorname{tg} y = 0$, $\quad y|_{x=1/2} = \dfrac{\pi}{4}$

$\qquad\qquad\qquad\qquad\qquad y'|_{x=1/2} = 1$.

7) $xy' = \dfrac{5x^2 + 2xy + 3y^2}{x + 2y}$