

Answer on Question #47292 – Math – Calculus

Task:

$$y = \frac{x}{(x+1)^2} \text{ differentiate it w.r.t } x$$

Answer:

$$\frac{dy}{dx} = \frac{(x+1)^2 - 2(x+1)x}{(x+1)^4} = \frac{x^2 + 2x + 1 - 2x^2 - 2x}{(x+1)^4} = \frac{1 - x^2}{(x+1)^4} = \frac{(1-x)(1+x)}{(x+1)^4} = \frac{1-x}{(x+1)^3}$$