Solution

$$\left(\ln\left(\frac{x}{x+2}\right)+1\right)' = \frac{2}{x(x+2)}$$

Steps

$$\left(\ln\left(\frac{x}{x+2}\right)+1\right)'$$

Apply the Sum/Difference Rule: $(f \pm g)' = f' \pm g'$

$$= \left(\ln\left(\frac{x}{x+2}\right)\right)' + 1'$$

$$\left(\ln\left(\frac{x}{x+2}\right)\right)' = \frac{2}{x(x+2)}$$ *Show Steps*

$$1' = 0$$ *Show Steps*

$$= \frac{2}{x(x+2)} + 0$$

Simplify

$$= \frac{2}{x(x+2)}$$