

Precalculus

Basic exponent equation of type $e^{px+q} = Ae^{rx+s}$

Todor Milev

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$$e^{-x-2} = 2 \quad \left| \text{Apply } \ln \right.$$

$$-x - 2 = \ln 2$$

$$-x = \ln 2 + 2$$

$$x = -(\ln 2 + 2)$$

$$x = -\ln 2 - 2 \quad \left| \text{Final answer} \right.$$

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Apply \ln

$$-x - 2 = \ln 2$$

$$-x = \ln 2 + 2$$

$$x = -(\ln 2 + 2)$$

$$x = -\ln 2 - 2$$

Final answer

$$x \approx -2.693$$

Calculator