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Question 9

The function $y = \ln x$ is transformed by first being dilated vertically by a scale factor of 3 and then translated horizontally 4 units to the left.

Find the equation of the transformed function.

a)
$$y = 3 \ln x^4$$

b) $y = 4 \ln x^3$

c)
$$y = 3\ln(x - 4)$$

d) $y = 3\ln(x+4)$