

Merry X-mas!

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$$\begin{array}{ll} y & = \frac{\ln\left(\frac{x}{m} - sa\right)}{r^2} & \# \text{ define } y \\ \Rightarrow & r^2 y = \ln\left(\frac{x}{m} - sa\right) & \# \text{ multiply both sides on the left by } r^2 \\ \Rightarrow & e^{r^2 y} = \frac{x}{m} - sa & \# \text{ exponentiate both sides, noting that } e^{\ln(x)} = x \\ \Rightarrow & me^{r^2 y} = x - msa & \# \text{ multiply both sides on the left by } m \\ \Rightarrow & me^{r^2 y} = x - mas & \# sa = as \text{ (assume multiplication is commutative)} \\ \Rightarrow & \mathbf{me^{r^2 y} = x - mas} & \# r^2 = rr \rightarrow \mathbf{Merry X-mas!} \end{array}$$