

Merry X-mas!

David Meyer

dmm@1-4-5.net

Last update: December 25, 2019

1 Merry X-mas!

$$\begin{aligned} y &:= \frac{\ln\left(\frac{x}{m} - sa\right)}{r^2} && \# \text{ define } y \\ \Rightarrow r^2 y &= \ln\left(\frac{x}{m} - sa\right) && \# \text{ multiply both sides on the left by } r^2 \\ \Rightarrow e^{r^2 y} &= e^{\ln\left(\frac{x}{m} - sa\right)} && \# x = y \Rightarrow b^x = b^y ; \text{ exponentiate with } b = e \\ \Rightarrow e^{r^2 y} &= \frac{x}{m} - sa && \# e^{\ln(x)} = x \\ \Rightarrow e^{r^2 y} &= \frac{x}{m} - as && \# \text{ assume multiplication is commutative } (sa = as) \\ \Rightarrow m e^{r^2 y} &= x - mas && \# \text{ multiply both sides on the left by } m \\ \Rightarrow \mathbf{m e^{r^2 y} = x - mas} &&& \# r^2 = rr \Rightarrow \mathbf{Merry X-mas!} \end{aligned}$$

2 L^AT_EX Source

<https://www.overleaf.com/read/sjrwjgkzzmmd>