

5. The following equation models bacteria growth: $P(t) = 100e^{2t}$ where population is measured in millions and time is measured in minutes.

[2] +2	a) Evaluate $P(4)$ (Leave e in your answer) $P(4) = 100e^8$
[2] +0	b) What does the value $P(4)$ represent in this context? The population is 4 millions.
[4] +0	c) What is the inverse function of $P(t)$? $\frac{1}{100e^{2t}}$
[4] +0	d) What does $P^{-1}(400)$ represent in terms of the context of the problem? NOTE: Do not evaluate $P^{-1}(400)$, just explain what it measures. The bacteria growth when population is 400 millions.

True/False: