Note: The integration work must be shown in all answers

P1 **Concept:** Find Laplace Transforms by integral definition
Find: Find the Laplace Transform of $f(t) = 4e^{-2t}u(t)$
Hints: You can check (not solve!) using the general solution given in class

P2 **Concept:** Find Laplace Transforms by integral definition
Find: Find the Laplace Transform of $f(t) = 3u(t-2)$
Hints: Will have a e^{-2s} term

P3 **Concept:** Find Laplace Transforms by integral definition
Find: Find the Laplace Transform of $f(t) = \cos(\omega t)u(t)$
Hints:
- Use Euler's Identity: $\cos(x) = \frac{e^{jx}+e^{-jx}}{2}$
- Put complex fractions over common denominator + simplify
- Answer is in the text