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Q1. Do you know your program outcomes (POs)? State them all. 6

Q2. Apply the Gamma & Beta functions to calculate: a) $\int_0^{\infty} e^{-x} x^{\frac{7}{2}} dx$, b) $\int_0^{\frac{\pi}{2}} \tan^{\frac{5}{2}} x \, dx$. 5

Q3. Apply the Fubini's theorem to calculate: $\int_{\cdot}^{2} \int_{\cdot}^{1} (x - y)^{\frac{5}{2}} dy \, dx$. 4