MATH 120 EXAM 2 REVIEW

Team 1 Presenters:

$$\int e^{e^x} e^x \, dx$$

$$\int_3^4 x\sqrt{x-3} \, dx$$

Team 2 Presenters:

$$\int \frac{\ln(1+x^2)}{x^2} \, dx$$

$$\int_0^1 x^2 e^x \, dx$$

Team 3 Presenters:

$$\int_0^1 x\sqrt{3x+7} \, dx$$

$$\int_0^{\frac{\pi}{2}} x\cos(x) \, dx$$

Team 4 Presenters:

Sketch the region bounded by $y = xe^{-x}$, $y = \frac{1}{e}$ and $x = 4$ and find the area of the region.

Sketch the region bounded by $y = x \sin(x)$, $y = \cos(x)$ and $x = 0$ and find the area of the region.

Team 5 Presenters:

Find the average value of the function $f(x) = \frac{e^{\tan(x)}}{\cos^2(x)}$ on the interval $[0, \frac{\pi}{4}]$.

Find the average value of the function $g(x) = x \ln(x) - x$ on the interval $[1, 4]$.

Team 6 Presenters:

Find the arc lengths of the curve $y = \frac{2}{3} x^{\frac{3}{2}}$ from the point $(0, 0)$ to the point $(4, \frac{16}{3})$

Find the arc lengths of the curve $y = \frac{x^3}{6} + \frac{1}{2x}$ from the point $(\frac{1}{2}, \frac{49}{48})$ to the point $(2, \frac{19}{12})$.