MATH 115 **Name:** _____

In class work 13, Fall 2022 **Row and Seat**: _____

In class work 13 has questions 1 through 2 with a total of 9 points. Turn in your work at the end of class *on paper*. This assignment is due *Wednesday 16 November 13:15* PM.

1. Find a formula for each antiderivative.

[1] (a) $\int (6x+3)(x+1)\,\mathrm{d}x =$

[1] (b) $\int (x-1)(x+2)\,\mathrm{d}x =$

[1] (c) $\int \frac{7}{x} + \frac{x}{7}\,\mathrm{d}x =$

[1] (d) $\int \frac{x+1}{\sqrt{x}}\,\mathrm{d}x =$

1 (e) $\int \cos(23\pi x)\,\mathrm{d}x =$

1 (f) $\int \cos(\pi x)^2 + \sin(\pi x)^2\,\mathrm{d}x =$

1 (g) $\int 5\mathrm{d}x =$

1 (h) $\int \mathrm{e}^{5x}\mathrm{d}x =$

1 2. Find numbers a and b such that $\int x\mathrm{e}^x \,\mathrm{d}x = (a+bx)\mathrm{e}^x + C$ is correct. Do this by requiring that $\frac{\mathrm{d}}{\mathrm{d}x}((a+bx)\mathrm{e}^x) = x\mathrm{e}^x$ be an identity.