MATH 1460: Calculus for the Biological Sciences
Elise Askelsen Name: _____
December 2, 2021 Section: _____

Quiz 11:

Please answer all of the questions in the space provided. Show all your work clearly and neatly, and box your final answer. No credit will be given for an answer without work to justify it. Be sure to check your work. You will be given 15 minutes for this 10 points quiz.

1. (3 points) Calculate the indefinite integral of **ONE** of the following integrals.
   (a) $\int \frac{e^{\sqrt{4y+2}}}{2\sqrt{4y+2}}\, dy$
   (b) $\int 3x^4 sin(x^5+4)\, dx$

2. (3 points) Find the area between the curves $y = x+3$, $y = -2x-3$, and $x = 0$.

3. (2 points) Use the *right hand approximation method* to approximate the area under the curve, $f(x)$ given on the interval $[0, 2]$ with two rectangles where the function value is given in the following table.

x	0	1/2	1	3/2	2
f(x)	4	7	3	8	2

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4. (2 points) Find the area under the curve $f(x) = cos(x)$ on the interval $[-\frac{\pi}{2}, \pi]$.

5. **Bonus:**(1 point) Calculate the following integral.

$$\int 3r\sqrt{8-r}\,dr$$

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6. **Bonus:**(0.5 point) If you were to teach this class, what is one thing you would do similarly, and what is one thing you would do differently