

Circle your Instructor: Faudree, Williams, Zirbes

\_\_\_\_\_ / 15

Name: \_\_\_\_\_

This is a 30 minute quiz. There are 15 problems. Books, notes, calculators or any other aids are prohibited. Calculators and notes are not allowed. **Your answers should be simplified unless otherwise stated.** You should use correct notation including the correct use of equal signs and integration symbols. There is no partial credit. If you have any questions, please raise your hand.

**Circle your final answer.**

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Evaluate the integral, if it exists.

1.  $\int \left( \frac{\sqrt{3x}}{2} - 1 + \frac{1}{5x} \right) dx$

2.  $\int (5^{1/2} - x^{\sqrt{3}}) dx$

3.  $\int \sin^4(2x) \cos(2x) dx$

4.  $\int_1^2 x^{-2} - e^x dx$

5.  $\int_0^1 \cos\left(\frac{\pi x}{2}\right) dx$

6.  $\int \csc x \cot x \, dx$

7.  $\int \frac{x}{\sqrt{1-x^2}} \, dx$

8.  $\int \frac{x^2}{3+x^3} \, dx$

9.  $\int \frac{1}{\sqrt{1-x^2} \arcsin x} \, dx$

10.  $\int \frac{\cos(\ln x)}{2x} \, dx$

11. 
$$\int_{1/2}^1 (2x - 1)^8 dx$$

12. 
$$\int r e^{r^2} dr$$

13. 
$$\int \frac{x^2}{1 + x^6} dx$$

14. 
$$\int \frac{e^{1/x}}{x^2} dx$$

15. 
$$\int \frac{3x - x^{1/5}}{x^3} dx$$