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.** There is no partial credit. If you have any questions, please raise your hand.

Circle your final answer.

For each function below, find the definite or indefinite integral.

1. $\int_1^2 9t^2 + 2t - 4\ dt$

2. $\int \cos\theta(3\sec^3\theta + \tan\theta)d\theta$

3. $\int \frac{3}{x(\ln x)^3}dx$

4. $\displaystyle\int 3\sin(10x)\,dx$

5. $\displaystyle\int_{1/2}^{1} \frac{3}{\sqrt{1-x^2}}\,dx$

6. $\displaystyle\int \frac{6x^2-4x}{x^2-x^3}\,dx$

7. $\displaystyle\int \frac{6e^{\sqrt[3]{x}+2}}{x^{2/3}}\,dx$

8. $\displaystyle\int_0^2 (4^x - 3)\, dx$

9. $\displaystyle\int \left(\sqrt[3]{2x} - \frac{x^2}{5} + \frac{2}{x^2} \right) dx$

10. $\displaystyle\int \frac{1}{(3x + 2)^{1/4}}\, dx$

11. $\displaystyle\int xe^{-x^2}\, dx$

12. $\int \dfrac{-3x}{\sqrt{1-x^2}}\,dx$

13. $\int \dfrac{x^3-2x}{\sqrt{x}}\,dx$

14. $\int e^{3u}\,du.$

15. $\int \sin x \sec(\cos x) \tan(\cos x)\,dx$