

Quiz Review

Evaluate the Integrals:

1. $\int (x-1)^{243} dx$

2. $\int \frac{1}{x^3\sqrt{x}} dx$

3. $\int \frac{1}{\sqrt{1-x}} dx$

4. $\int x\sqrt{2x^2-1} dx$

5. $\int (1+x^3)3x^2 dx$

6. $\int \frac{x^3-8}{x-2} dx$

7. $\int \frac{x^2}{\sqrt{1+x^3}} dx$

8. $\int \frac{8}{\sec x} dx$

9. $\int 2xe^{x^2} dx$

10. $\int \frac{\sin x}{\cos^2 x} dx$

11. Find the average value
 $f(x) = 4\sqrt{x}$ from $[0, 3]$

12. Find the value of c that satisfies the MVT for integrals
 $f(x) = -x^2 - 8x - 17$
 $[-5, -3]$

13. $\int_1^0 \frac{3}{3x-2} dx$

14. $\int_0^{\pi/4} \tan x \sec^2 x dx$

15. $\int_0^3 \frac{1}{x+1} dx$

16. $\int_1^2 \frac{2\ln x}{x} dx$

17. $\int_1^4 \frac{e^{\sqrt{x}}}{2\sqrt{x}} dx$

18. $\int_{\pi/6}^{\pi/2} \sin^2 x \cos x dx$