

Math 2320 - Quiz 4

Name: _____

1. $\int \sec(3x) \, dx$

2. $\int \csc(3x) \, dx$

3. $\int \tan(3x) \, dx$

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

5. $\int \sin^3(2v) \, dv$

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

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

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

9. Just algebra for this problem, find the partial fraction decomposition for the following.

(a) $\frac{x+1}{(x-2)(3x+2)}$

(b) $\frac{x+1}{(x-2)^2(x+2)}$

(c) $\frac{3x^2+2x+1}{(x^2+2)(x+2)}$

(d) $\frac{2x^2-x-3}{x^2-x-2}$ Note this fraction is improper and the denominator is not factored.

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