MATH 1B DISCUSSION WORKSHEET - 8/28/18

TRIGONOMETRIC INTEGRALS AND SUBSTITUTIONS

1. Previously covered trigonometric integrals

$$\int \sin^{2018}(x)\cos(x)dx \qquad \int \sin^4(x)dx$$

2. Powers of trigonometric functions

$$\int \sin^9(x)\cos^3(x)dx \qquad \int \sin^8(x)\cos^4(x)dx \qquad \int \tan^9(x)\sec^5(x)dx \qquad \int \tan^8(x)\sec^4(x)dx$$

3. Constants within the trigonometric functions

$$\int \sin(3x)\sin(5x)dx \qquad \int \sin(3x)\cos(5x)dx \qquad \int \cos(3x)\cos(5x)dx$$

4. Trigonometric Substitution

$$\int \frac{\sqrt{x^2-1}}{x^4}dx \qquad \int \frac{dx}{\sqrt{x-x^2}} \qquad \int \frac{(x+3)^5}{(40-6x-x^2)^{3/2}}dx$$