

Evaluate the following

1. $\int \cos(5x) \sin(5x) \sin(\sin(5x)) \, dx$

2. $\int_{-5}^5 \arctan(x) x^4 \, dx$

3. $\int e^x \cos(x) \, dx$ Hint: Try parts twice and be careful with your signs

4. $\int_0^\pi \sin(x^2) \, dx$