

Evaluate the following integrals using integration by parts,
and *check your answers!!*

1. $\int e^x \cos(x) dx$

2. $\int \arctan(x) dx$

3. $\int (\ln(x))^2 dx$

4. $\int x \sec^2(x) dx$

5. $\int x^3 e^{x^2} dx$

6. $\int x^2 \arcsin(x) dx$

7. $\int \sin(\ln(x)) dx$