Math 232 Worksheet - Integration by Parts

Evaluate the integral using integration by parts.

$$(1) \int x \cos x \, dx \quad (2) \int xe^{-x} \, dx \quad (3) \int x \ln x \, dx \quad (4) \int e^x \cos x \, dx$$

$$(5) \int_0^{\pi/2} \cos^3 x \, dx \quad (6) \int_0^1 \arcsin x \, dx \quad (7) \int_0^1 e^{\sqrt{x}} \, dx$$