Concepts
L’Hospital’s Rule:

Indeterminate forms:

Integration by parts:

Tabular Method:

Problems
§5.8 Indeterminate forms and l’Hospital’s Rule

Find the limit.
1. \( \lim_{x \to 0} \left( \csc x - \cot x \right) \)

2. \( \lim_{x \to 0} \left( e^x + x \right)^{\frac{1}{x}} \)
§6.1 Integration by parts
Evaluate
3. \( \int x^2 e^{3x} \, dx \)

4. \( \int x^5 e^{3x} \, dx \)

5. \( \int_{0}^{1} \arccos x \, dx \)

6. \( \int e^x \sin(mx) \, dx \)

Math Mirth: Want to hear a funny joke about limits? Oh wait, DNE.