

START HERE

Improper?

Infinite bound or asymptote?

Yes

§ 7.8 Improper Integrals
Use Limits

No

Pre-Check: Simplify
Algebra & Identities

§ 5.5 u-Substitution
Reverse Chain Rule

u-Substitution?

Function & its derivative?

Yes

No

Integration By Parts?

Product? Log? Inv Trig?

Yes

§ 7.1 Integration By Parts
LIATE Rule

No

§ 7.2 Trig Integrals
Use Identities

Trig Powers?

$\sin^m(x)$ $\cos^n(x)$ etc.

Yes

No

Radicals?

$\sqrt{a^2 - x^2}$ etc.

Yes

§ 7.3 Trig Substitution
Draw a Triangle

No

§ 7.4 Partial Fractions
Decompose Denominator

Rational Function?

Polynomial / Polynomial

Yes