Trigonometric Integrals:

$$\int \cos^n \theta \sin^m \theta \, d\theta$$

If n is odd then use the trigonometric identity $\cos^2 \theta + \sin^2 \theta = 1$ together with the substitution $u = \cos \theta$ to obtain an integral of the form $\int P(u) \, du$ where $P(u)$ is a polynomial.

If m is odd then use the substitution $u = \sin \theta$

If n and m are both odd then either $u = \cos \theta$ or $u = \sin \theta$ can be used.

If both n and m are both even integers, use the trigonometric identity $\cos 2\theta = \cos^2 \theta - \sin^2 \theta$