100 Days 100 Integrals
DAY 37

$$\int x^3 \sin 2x \; dx = -\frac{1}{2}x^3 \cos 2x + \frac{3}{4}x^2 \sin 2x + \frac{3}{4}x \cos 2x - \frac{3}{8} \sin 2x + C$$