Prob. 1
Calculate \( \int \csc^6 x \, dx \)
Prob. 2
Find $\int \frac{\sqrt{9-x^2}}{x^2} \, dx$
Prob. 3
Find \( \int \frac{dv}{v^3 \sqrt{v^2 - 9}} \)
Prob. 4
Compute $\int \frac{dt}{t^2-16}$
Prob. 5

Compute \[ \int_{-\infty}^{\infty} \frac{du}{u^2+6u+12} \]
Prob. 6

Find \( \int_{1}^{+\infty} \frac{dx}{x\sqrt{x^2-1}} \)
Prob. 7
Compute \( \int \frac{dz}{\sqrt{z^2 + 8z + 25}} \)
Prob. 8
Find $\int \frac{u^3}{\sqrt{9+u^2}} \, dw$
Prob. 9

Find (a) $\int \frac{(x^2+2x-3)dx}{x^3(x+3)^3(x+1)^2}$
(b) $\int \frac{t^4+t^3-t-1}{(t^2+t+1)(t+1)^2}dt$
Prob. 10

Find (a) \( \int \frac{(3s^4 - 2)ds}{(s-1)(6s^2 + 5s - 4)^3} \)

(b) \( \int \frac{r^6 + r^3 - r}{r^3(r^2 + 3r + 4)} \, dr \)