

1)

$$\frac{14}{3}x^{-3/2} + 6x^{7/2} + 5 \ln x + C$$

2)

$$\frac{5x + 7}{x^2 + 5} - \frac{5}{x + 6}$$

3)

$$\frac{1}{20} \sin(10x) + \frac{x}{2} + C$$

4)

$$\frac{\cos^3(5x)}{15} - \frac{\cos(5x)}{5} + C$$

5)

$$\frac{-1}{4\sqrt{8x^3 + 20x^2 + 19}} + C$$

6)

$$-\frac{1}{2} \ln(7 - 2x) + 6e^{\frac{x}{6}} + C$$

7)

$$\frac{(4x + 9)^{3/2}}{24} - \frac{9}{8}(4x + 9)^{1/2} + C$$

8)

$$\frac{x^6}{6} \ln(x) - \frac{x^6}{36} + C$$

9)

$$3 \ln(x^2 + 100) + 2 \arctan\left(\frac{x}{10}\right) + C$$

10)

$$\frac{5}{216} \int_{\frac{\pi}{4}}^{\frac{\pi}{3}} \tan^2(\theta) d\theta$$