

Substitution wkst.

1.  $\sin x + C$

2.  $-\cot x + x^3 + C$

3.  $e^u + C \Rightarrow \frac{e^{2u}}{e^u} = e^{2u-u} = e^u$

4.  $3 \tan^{-1} t + C$

5.  $\frac{-1}{4} (1-4x^2)^{\frac{1}{2}} + C$

6.  $\frac{2}{3} (1+t^2)^{\frac{3}{2}} + C$

7.  $\frac{1}{7} \sin(7t+5) + C$

8.  $\frac{1}{6} (\ln x)^2 + C$

9.  $-\cos x + \frac{\cos^3 x}{3} + C$

$$10. \quad -\csc x - \sin x + C$$

$$11. \quad \frac{\tan^2 x}{2} + C$$

$$12. \quad -2 + 2\sqrt{2}$$