

you need to be able to finish these in less than a minute

1.

$$\int x dx = \frac{1}{2}x^2 + C$$

2.

$$\int \sqrt[3]{x} dx = \int x^{1/3} dx = \frac{3}{4}x^{4/3} + C$$

3.

$$\int \frac{1}{x} dx = \ln|x| + C$$

4.

$$\int \frac{1}{\sqrt{x}} dx = 2\sqrt{x} + C$$

5.

$$\int \frac{1}{1+x^2} dx = \tan^{-1} x + C$$

6.

$$\int \frac{1}{\sqrt{1-x^2}} dx = \sin^{-1} x + C$$

7.

$$\int \frac{1}{x\sqrt{x^2-1}} dx = \sec^{-1} x + C$$

8.

$$\int e^x dx = e^x + C$$

9.

$$\int \sin x dx = -\cos x + C$$

10.

$$\int \cos x dx = \sin x + C$$

11.

$$\int \sec^2 x dx = \tan x + C$$

12.

$$\int \sec x \tan x dx = \sec x + C$$