Cálculo 2 - Lista 19

1. $\int \frac{3dz}{8+7\cos z}$

2. $\int \frac{dx}{1+\sin x}$

3. $\int \frac{3dx}{7+8\cos x}$

4. $\int \frac{dx}{\sin x - \cos x + 2}$

5. $\int \frac{dx}{\sin x + \tan x}$

6. $\int \frac{dx}{5+4\cos x}$

7. $\int \frac{dx}{3-5\sin x}$

8. $\int \frac{dx}{4\sin x - 3\cos x} \, dx$

Respostas

1. $\frac{6}{\sqrt{15}} \arctan(\frac{1}{\sqrt{15}} \tan \frac{x}{2}) + C$

2. $\frac{-2}{1+\tan \frac{x}{2}} + C$

3. $\frac{3}{\sqrt{15}} \ln \left| \frac{\sqrt{15}+\tan \frac{x}{2}}{-\sqrt{15}+\tan \frac{x}{2}} \right| + C$

4. $\sqrt{2} \arctan \left(\frac{1+3\tan \frac{x}{2}}{\sqrt{2}} \right) + C$

5. $\frac{1}{2} \ln |\tan \frac{x}{2}| - \frac{1}{4} \tan^2 \frac{x}{2} + C$

6. $\frac{2}{3} \arctan \left(\frac{1}{3} \tan \frac{x}{2} \right) + C$

7. $\frac{1}{4} \ln \left| \frac{-3+\tan \frac{x}{2}}{-\frac{1}{3}+\tan \frac{x}{2}} \right| + C$

8. $\frac{1}{5} \ln \left| \frac{-\frac{1}{3}+\tan \frac{x}{2}}{3+\tan \frac{x}{2}} \right| + C$