

The only way to learn mathematics is to do mathematics

1. $\int \frac{1}{x^2 - 10x + 34} dx$

2. $\int \frac{1}{9x^2 + 6x + 10} dx$

3. $\int \frac{1}{1+x-x^2} dx$

4. $\int \frac{1}{3x^2 + 13x - 10} dx$

5. $\int \frac{1}{\sqrt{x(1-2x)}} dx$

6. $\int \frac{1}{\sqrt{16-6x-x^2}} dx$

7. $\int \frac{1}{\sqrt{x^2 - 4x + 2}} dx$

8. $\int \frac{1}{\sqrt{3x^2 + 5x + 7}} dx$

9. $\int \frac{1}{\sqrt{5x^2 - 2x}} dx$

10. $\int \frac{1}{\sqrt{(x-a)(x-b)}} dx$



ANSWERS-DPP-27

1. $\frac{1}{3} \tan^{-1} \left(\frac{x-5}{3} \right) + C$

2. $\frac{1}{9} \tan^{-1} \left(\frac{3x+1}{3} \right) + C$

3. $\frac{1}{\sqrt{5}} \log \left| \frac{\sqrt{5}-1+2x}{\sqrt{5}+1-2x} \right| + C$

4. $\frac{1}{17} \log \left| \frac{3x-2}{3(x+5)} \right| + C$

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

6. $\sin^{-1} \left(\frac{x+3}{5} \right) + C$

7. $\log \left| x-2+\sqrt{x^2-4x+2} \right| + C$

8. $\frac{1}{\sqrt{3}} \log \left| x + \frac{5}{6} + \sqrt{x^2 + \frac{5}{3}x + \frac{7}{3}} \right| + C$

9. $\frac{1}{\sqrt{5}} \log \left| \frac{5x-1}{5} + \frac{\sqrt{5x^2-2x}}{\sqrt{5}} \right| + C$

10. $2 \log \left| \sqrt{x-a} + \sqrt{x-b} \right| + C$