

The only way to learn mathematics is to do mathematics

1. $\int \frac{1}{4+9x^2} dx$

2. $\int \frac{1}{9x^2-4} dx$

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

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

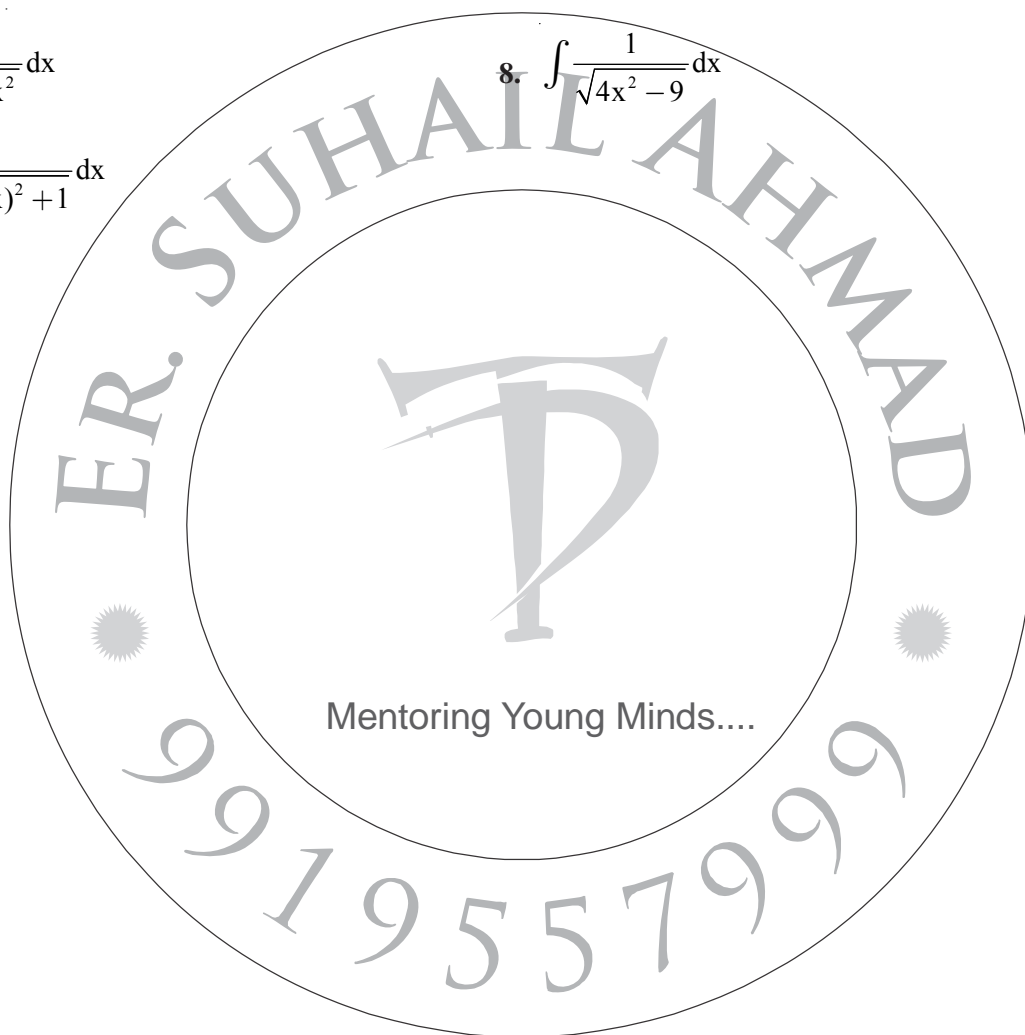
5. $\int \frac{x^2-1}{x^2+4} dx$

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

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

8. $\int \frac{1}{\sqrt{4x^2-9}} dx$

9. $\int \frac{1}{\sqrt{(2-x)^2+1}} dx$



ANSWERS-DPP-26

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

2. $\frac{1}{12} \log \left| \frac{3x-2}{3x+2} \right| + C$

3. $\frac{1}{2ab} \log \left| \frac{a+bx}{a-bx} \right| + C$

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

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

6. $\frac{1}{b} \sin^{-1} \left(\frac{bx}{a} \right) + C$

7. $\frac{1}{2} \log |2x + \sqrt{4x^2+1}| + C$

8. $\frac{1}{2} \log \left| x + \sqrt{x^2 - \frac{9}{4}} \right| + C$

9. $-\log |(2-x) + \sqrt{(2-x)^2+1}| + C$