Integration

1. Evaluate $\displaystyle\int \frac{\sin^3(x)}{\sqrt{\cos(x)}}\,dx$.

2. Evaluate $\displaystyle\int x^2 \sin(x)\,dx$.

3. Evaluate $\displaystyle\int \frac{x^3}{2x-1}\,dx$.

4. Evaluate $\displaystyle\int \frac{\sec^2(x)}{1+\tan(x)}\,dx$.

5. Evaluate $\displaystyle\int \frac{x+1}{x^3-x^2}\,dx$.

6. Evaluate $\displaystyle\int \frac{\cos(x)}{\sin^2(x)-\sin(x)-6}\,dx$.

7. Evaluate $\displaystyle\int (1-x^2)^{\frac{3}{2}}\,dx$.