Answer on Question#50936 – Math – Integral Calculus

Question. Integrate with respect to Q: $\int_0^{\frac{\pi}{3}}(2\sin Q - 5\cos Q)dQ$.

Solution. $\int_0^{\frac{\pi}{3}}(2\sin Q - 5\cos Q)dQ = (-2\cos Q - 5\sin Q)|_{Q=0}^{\frac{\pi}{3}} = -2\cdot\frac{1}{2} - 5\cdot\frac{\sqrt{3}}{2} + 2 - 0 =$

$= 1 - \frac{5\sqrt{3}}{2} = \frac{2-5\sqrt{3}}{2}$.

Answer. $\frac{2-5\sqrt{3}}{2}$.