$$\int \frac{3x-4}{2x+5}\,dx =$$

INT-S1-045

sostituzione: $\boxed{2x+5=z}$

$$2x = z-5$$

$$x = \frac{1}{2}z - \frac{5}{2}$$

$$x' = \frac{dx}{dz} = \frac{1}{2}$$

$$dx = \frac{1}{2}\,dz$$

$$\int \frac{3\left(\frac{1}{2}z-\frac{5}{2}\right)-4}{z}\cdot\frac{1}{2}\,dz = \int \frac{\frac{3}{2}z-\frac{15}{2}-4}{2z}\,dz =$$

$$= \int \frac{\frac{3}{2}z+\frac{-15-8}{2}}{2z}\,dz = \int \frac{\frac{3}{2}z-\frac{23}{2}}{2z}\,dz =$$

$$= \int \frac{3z}{4z} - \frac{23}{4z}\,dz = \int \frac{3}{4}\,dz - \int \frac{23}{4}\,\frac{1}{z}\,dz =$$

$$= \frac{3}{4}z - \frac{23}{4}\ln|z| + k =$$

$$= \frac{3}{4}(2x+5) - \frac{23}{4}\ln|2x+5| + k =$$

$$= \frac{3}{2}x - \frac{23}{4}\ln|2x+5| + \frac{15}{4} + k =$$

$$= \boxed{\frac{3}{2}x - \frac{23}{4}\ln|2x+5| + C}$$

RD