

$$\int \cos(2x)\sin(2x)dx =$$

Utilizzando il metodo per parti

$$\int \cos(2x)\sin(2x)dx = \frac{1}{2} \int 2 \cos(2x)\sin(2x)dx =$$

$$= \frac{1}{2} \left[\sin(2x)\sin(2x) - \int 2 \sin(2x)\cos(2x)dx \right]$$

$$\int \cos(2x)\sin(2x)dx = \frac{1}{2} \left[\sin(2x)\sin(2x) - \int 2 \sin(2x)\cos(2x)dx \right] =$$

$$2 \int \cos(2x)\sin(2x)dx = \frac{1}{2} \sin(2x)\sin(2x) = \frac{1}{4} \sin^2(2x) + c$$

$$\int \cos(2x)\sin(2x)dx = \frac{1}{4} \sin(2x)\sin(2x) = \frac{1}{4} \sin^2(2x) + c$$