$u'v \qquad\qquad u\cdot v - \int u v'$

$$\int (x+2)\ln x \, dx = \left(\frac{x^2}{2}+2x\right)\ln x - \int \underbrace{\left(\frac{x^2}{2}+2x\right)\cdot\frac{1}{x}} \, dx$$

Per parti $\qquad u' = x+2 \quad v = \ln x \qquad \frac{1}{2}x + 2$

$\qquad\qquad u = \frac{x^2}{2}+2x \quad v' = \frac{1}{x}$

$$= \left(\frac{x^2}{2}+2x\right)\ln x - \left(\frac{1}{2}\frac{x^2}{2}+2x\right) + c \qquad x>0$$

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$$\int \frac{\sqrt{\arcsin x}}{\sqrt{1-x^2}}\,dx = \int \sqrt{\arcsin x}\cdot\frac{1}{\sqrt{1-x^2}}\,dx$$

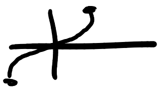
$y = \arcsin x$

$dy = \frac{1}{\sqrt{1-x^2}}\,dx$

$$= \int \sqrt{y} \; dy \qquad \leftarrow y^{\frac12}$$

$$= \frac{y^{\frac12+1}}{\frac12+1} + c = \frac{\sqrt{y^3}}{\frac32} + c$$

~~$x \in (-1,1)$~~



$x \in (0,1)$ :)

$$= \frac{2}{3}\sqrt{(\arcsin x)^3} + c$$