Use tabular integration to integrate the following

$$A.\ \int \arcsin(x)dx$$

19. $\int e^x \cos(2x)dx = \frac{1}{2}e^x\sin(2x) - \frac{1}{2}\int e^x \sin(2x)$

$e^x \rightarrow \frac{1}{2}\sin(2x)$

$e^x \rightarrow \frac{-1}{2}\cos(2x)$

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

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

$$+\frac{1}{4}\int e^x\cos(2x)dx \qquad +\frac{1}{4}\int e^x\cos(2x)dx$$

$$\frac{4}{5}\left[\cdot\frac{5}{4}\int e^x\cos(2x)dx\right] = \left[\frac{1}{2}e^x\sin(2x) + \frac{1}{4}e^x\cos(2x)\right]\frac{4}{5}$$

$$\boxed{\int_0^1 e^x\cos(2x)dx = \frac{2}{5}e^x\sin(2x) + \frac{1}{5}e^x\cos(2x)\Big]_0^1}$$