

$$3. (c) \int_1^2 \frac{1}{\sqrt{2-x}} dx$$

$$\int \frac{1}{\sqrt{2-x}} dx = \int (2-x)^{-\frac{1}{2}} dx = \frac{(2-x)^{-\frac{1}{2}+1}}{-\frac{1}{2}+1} = \frac{(2-x)^{\frac{1}{2}}}{\frac{1}{2}} = 2\sqrt{2-x} + C$$

$$\int \sec^3 x dx = \int \frac{1}{\cos^3 x} dx = \tan x + C$$