1.) $\int (4x+3)^7 \, dx \rightarrow dx = \frac{1}{t} \times dt$, $t = (4x+3)^7$, $t = 4$

$= \int (4x+3)^7 \times \frac{1}{4} \, dt$

$= \int \frac{t^7}{4} \, dt$

$= \frac{1}{4} \times \int t^7$

$= \frac{1}{4} \times \frac{t^8}{8}$

$= \frac{1}{4} \times \frac{(4x+3)^8}{8}$

$= \frac{(4x+3)^8}{32} + C$

2.) $\int x(x+5)^4 \, dx$, $t = 1$, $dx = \frac{1}{t} \times dt$, $t = x+5$

$= \int x(x+5)^4 \times dt$

$= \int (x+5-5) \times (x+5)^4 \, dt$

$= \int (t-5) t^4$

$= \int t^5 - 5t^4$

$\frac{t^6}{6} - t^5$

$\frac{(x+5)^6}{6} - (x+5)^5 + C$

3.) $\int (3x-2)(x+6) \, dx$

$= \int 3x^2 + 16x - 12 \, dx$

$= \int 3x^2 + \int 16x - \int 12 \, dx$

$= \frac{3x^3}{3} + \frac{16x^2}{2} - 12x \, dx$

$= x^3 + x^2 - 12x + C$

4.) $\int (x-2)(x^2-4x+3)^5 \, dx$

- Cari hasil integral $(x-2)$

$\int (x-2) \, dx$

$\int x - \int 2 \, dx$

$\frac{x^2}{2} - 2x + C$

- Cari hasil integral $(x^2-4x+3)^5$

5.) $\int x\sqrt{4x+1}\,dx \Rightarrow t = 4x+1$

$t' = 4$

$dx = \frac{1}{t'} \times dt$

$= \int x\sqrt{4x+1}\ \frac{1}{4}\,dt$

$= \int \frac{t-1}{4}\sqrt{t}\ \frac{1}{4}\,dt$

$= \int \frac{(t-1)\sqrt{t}}{16}\,dt$

$= \int \frac{t\sqrt{t}-\sqrt{t}}{16}\,dt$

$\frac{1}{16} \times \int t \times t^{\frac{1}{2}} - \int t^{\frac{1}{2}}\,dt$

$\frac{1}{16} \times \int t^{\frac{3}{2}} - \int t^{\frac{1}{2}}\,dt$

$\frac{1}{16} \times \frac{2t^{\frac{5}{2}}}{5} - \frac{2t^{\frac{3}{2}}}{3}$

$\frac{1}{16} \times \left(\frac{2t^2\sqrt{t}}{5} - \frac{2t\sqrt{t}}{3}\right)$

$\frac{1}{16} \times (3$

$\sqrt{4x+1}($

6.) $\int \left(2x + \frac{1}{2x}\right)^2 dx$

$= \int 4x^2 + \frac{4x}{2x} + \frac{1}{4x^2}\,dx$

$= \int 4x^2 + \int 2 + \int \frac{1}{4x^2}\,dx$

$= \frac{4x^3}{3} + 2x - \frac{1}{4x} + C$

7.) $\int x^2\,dx$

$= \frac{x^3}{3}$ //

8.) $\int \frac{x^2}{2}$

$\int \frac{x^2}{2} -$

$\int \frac{x^2}{2} -$

$\int x -$

$= \frac{x^2}{2} - 2$