

$$\frac{f(x)}{g(x)} = \frac{A}{ax+b} + \frac{B}{cx+d}$$

$$\frac{f(x)}{g(x)} = \frac{A}{ax+b} + \frac{B}{(ax+b)^2}$$

$$\frac{f(x)}{g(x)} = \frac{A}{ax+b} + \frac{Bx+C}{px^2+qx+r}$$