1. $\displaystyle\int \frac{x^4}{x-1}\, dx$

2. $\displaystyle\int \frac{2}{2x^2+3x+1}\, dx$

3. $\displaystyle\int \frac{x}{x^2+2x-3}\, dx$

4. $\displaystyle\int \frac{x^2+1}{(x-1)(x-3)^2}\, dx$

5. $\displaystyle\int \frac{x}{(x+4)(2x-1)}\, dx$

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

7. $\displaystyle\int \frac{2(x^2+3x)}{x^2-4}\, dx$

8. $\displaystyle\int \frac{4}{(x-1)^2(x+1)}\, dx$

9. $\displaystyle\int \frac{x^2+1}{x(x^2-1)}\, dx$

10. $\displaystyle\int \frac{2x}{x^2-25}\, dx$

11. $\displaystyle\int \frac{x^2-8x-1}{x^3(x+2)^2}\, dx$

12. $\displaystyle\int \frac{2x-3}{(x-3)^3}\, dx$