แบบฝึกหัด เรื่อง การหาปริพันธ์ของฟังก์ชันตรรกยะ

1. จงหาค่าปริพันธ์ต่อไปนี้

1.1 $\int \frac{5x-13}{(x-3)(x-2)}dx$

1.2 $\int \frac{5x-7}{x^2-3x+2}dx$

1.3 $\int \frac{1}{(x-1)(x+2)(x-3)}dx$

1.4 $\int \frac{x^2+1}{(x-1)(x-2)(x-3)}dx$

1.5 $\int \frac{x+4}{x^3+3x^2-10x}dx$

1.6 $\int \frac{x^2+4x+1}{(x-1)(x+1)(x+3)}dx$

1.7 $\int \frac{6x+7}{(x+2)^2}dx$

1.8 $\int \frac{5x-3}{x^2-2x-3}dx$

1.9 $\int \frac{2x^3-4x^2-x-3}{x^2-2x-3}dx$

1.10 $\int \frac{x-1}{(x+1)^3}dx$

1.11 $\int \frac{x+4}{(x+1)^2}dx$

1.12 $\int \frac{2x+2}{x^2-2x+1}dx$

1.13 $\int \frac{x^2}{(x-1)(x^2+2x+1)}dx$

1.14 $\int \frac{x-1}{x^2(x-1)}dx$

1.15 $\int \frac{x^2+8}{x^2-5x+6}dx$

1.16 $\int \frac{x}{x^3-x^2-6x}dx$

1.17 $\int \frac{1}{1-x^2}dx$

1.18 $\int \frac{1}{x^2+2x}dx$

1.19 $\int \frac{x+4}{x^2+5x-6}dx$

1.20 $\int \frac{2x+1}{x^2-7x+12}dx$

1.21 $\int \frac{x}{x^2-2x-3}dx$

1.22 $\int \frac{x+4}{x^2+x}dx$

1.23 $\int \frac{1}{x^3+x^2-2x}dx$

1.24 $\int \frac{x+3}{2x^3-8x}dx$

1.25 $\int \frac{x^3}{x^2+2x+1}dx$

1.26 $\int \frac{2x^2-25x-33}{(x+1)^2(x-5)}dx$

1.27 $\int \frac{7x+2}{x^2+x-2}dx$

1.28 $\int \frac{3x-5}{(x-1)^2}dx$

1.29 $\int \frac{11-x}{x^2+3x-4}dx$

1.30 $\int \frac{4x+10}{x^2+2x-8}dx$

1.31 $\int \frac{9x^2-4x-4}{x^3-4x}dx$

1.32 $\int \frac{x^3+2}{x^2+x}dx$

คำตอบแบบฝึกหัด

1.1 - 1.26 ไม่มีเฉลย

1.27 $3\ln|x-1|+4\ln|x+2|+c$

1.28 $3\ln|x-1|+\dfrac{2}{x-1}+c$

1.29 $2\ln|x-1|-3\ln|x+4|+c$

1.30 $3\ln|x-2|+\ln|x+4|+c$

1.31 $\ln|x|+3\ln|x-2|+5\ln|x+2|+c$

1.32 $\dfrac{1}{2}x^2-x+2\ln|x|-\ln|x+1|+c$