

แบบฝึกหัด เรื่อง การอินทิเกรตฟังก์ชันตรรกยะ

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

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

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

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

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

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

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

คำตอบแบบฝึกหัด

1.1 - 1.26 ไม่มีเฉลย

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

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

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

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

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

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