แบบฝึกหัดปริพันธ์สองชั้น ชุดที่ 2

1.จงหาค่าของปริพันธ์ต่อไปนี้

1.1 $\int_0^3 \int_{\sqrt{x/3}}^1 e^{y^3}\, dydx$

1.2 $\int_0^2 \int_x^2 2y^2 \sin xy\ dydx$

1.3 $\int_0^2 \int_0^{4-x^2} \frac{xe^{2y}}{4-y} dydx$

1.4 $\int_0^1 \int_y^1 x^2 e^{xy}\, dxdy$

1.5 $\int_0^\pi \int_x^\pi \frac{\sin y}{y}\, dydx$

1.6 $\int_0^8 \int_{\sqrt[3]{x}}^2 \frac{1}{y^4+1} dydx$

2.จงหาค่าของปริพันธ์ต่อไปนี้

2.1 $\int_0^1 \int_0^{\sqrt{1-x^2}} \left(x^2+y^2\right) dydx$

2.2 $\int_0^2 \int_0^{\sqrt{2x-x^2}} \sqrt{x^2+y^2}\ dydx$

2.3 $\int_{-2}^2 \int_{-\sqrt{4-y^2}}^{\sqrt{4-y^2}} e^{-\left(x^2+y^2\right)}\, dxdy$

2.4 $\int_0^1 \int_0^{\sqrt{1-y^2}} \cos\left(x^2+y^2\right) dxdy$

2.5 $\int_{-1}^1 \int_{\sqrt{1-y^2}}^{\sqrt{1-y^2}} \left(x^2+y^2\right) dxdy$

2.6 $\int_0^1 \int_{-\sqrt{1-x^2}}^0 \frac{2}{1+\sqrt{x^2+y^2}} dydx$

2.7 $\int_{-1}^1 \int_{-\sqrt{1-y^2}}^0 \frac{4\sqrt{x^2+y^2}}{1+x^2+y^2}\, dxdy$

2.8 $\int_0^{\ln 2} \int_0^{\sqrt{(\ln 2)^2-y^2}} e^{\sqrt{x^2+y^2}}\ dxdy$

2.9 $\int_0^2 \int_0^{\sqrt{1-(x-1)^2}} \frac{x+y}{x^2+y^2}\, dydx$

2.10 $\int_0^2 \int_{-\sqrt{1-(y-1)^2}}^0 xy^2\ dxdy$

2.11 $\int_{-1}^1 \int_{-\sqrt{1-y^2}}^{\sqrt{1-y^2}} \ln\left(x^2+y^2+1\right) dxdy$

2.12 $\int_{-1}^1 \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} \frac{2}{\left(1+x^2+y^2\right)^2}\, dydx$

2.13 $\int_0^1 \int_y^{\sqrt{y}} \sqrt{x^2+y^2}\, dxdy$

2.14 $\int_{-2}^0 \int_{-\sqrt{4-x^2}}^0 \frac{1}{\left(1+x^2+y^2\right)^{3/2}}\, dydx$

2.15 $\int_0^{\sqrt{2}} \int_y^{\sqrt{4-y^2}} \frac{1}{\sqrt{1+x^2+y^2}}\, dxdy$

2.16 $\int_{-3}^3 \int_0^{\sqrt{9-x^2}} \sin\left(x^2+y^2\right) dydx$

2.17 $\int_0^1 \int_y^{\sqrt{2-y^2}} \left(x+y\right) dxdy$

2.18 $\int_0^a \int_{-\sqrt{a^2-y^2}}^0 x^2 y\ dxdy \quad ; (a>0)$