

By part

1) ~~amais~~ u wa: dv

$$\int x^2 e^{3x} dx$$

$$u =$$

$$dv =$$

$$\int x (\ln x)^2 dx$$

$$u =$$

$$dv =$$

$$\int \arcsin x dx$$

$$u =$$

$$dv =$$

$$\int \sqrt{x} \sin(3x+1) dx$$

$$u =$$

$$dv =$$

$$\int (x+1)^3 \ln x dx$$

$$u =$$

$$dv =$$

2) ~~amais~~  $\int \frac{\ln x}{x^3} dx$

ကန့်သတ်ချက်

၁) အကန့်သတ်ချက်

✓  
၊ အကန့်သတ်ချက်

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

=

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

=

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

=

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၂) အကန့်သတ်ချက်

$$\int \frac{-x^2 - x - 13}{(x-1)(x^2+4)} dx$$

1 ✓ 5

1)  $\int \frac{dx}{\sqrt{16+x^2}}$   $\int \frac{1}{x^2 \sqrt{x^2-36}} dx$   $\int \frac{(4x^2-1)^{\frac{3}{2}}}{x} dx$

$$\int \frac{dx}{\sqrt{16+x^2}}$$

$$Q_{\frac{1}{2}} x =$$

\_\_\_\_\_

$$\int \frac{1}{x^2 \sqrt{x^2-36}} dx$$

$$Q_{\frac{1}{2}} x =$$

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

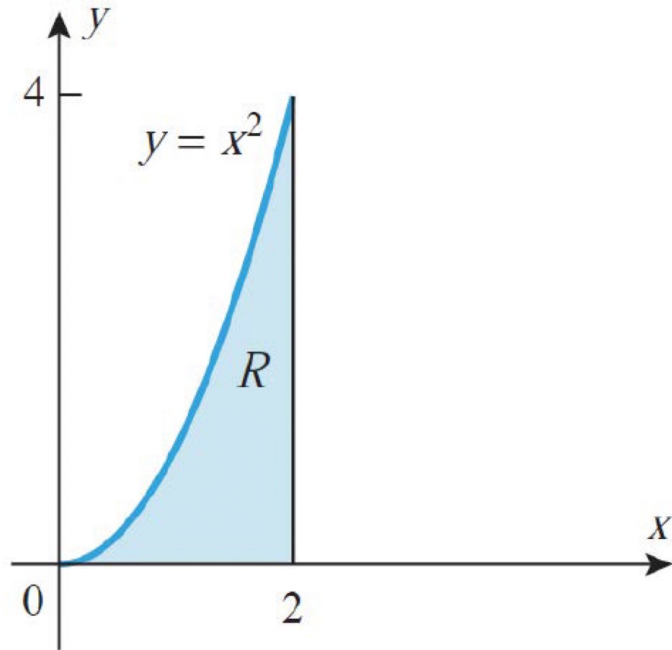
$$Q_{\frac{1}{2}} x =$$

\_\_\_\_\_

2)  $\int \frac{1}{x^2 \sqrt{x^2-36}} dx$

2  
ส่วน

1) พื้นที่ใต้เส้นโค้ง  $\int$



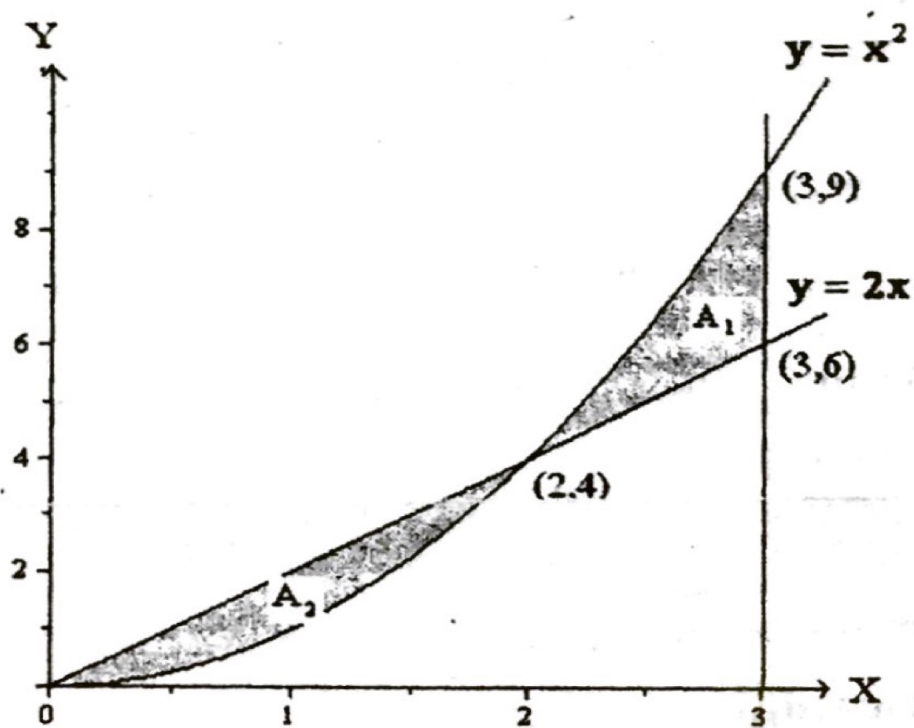
เมื่อ  $x$  ;  $A =$

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เมื่อ  $y$  ;  $A =$

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2)  $\int$   $\frac{1}{x^2}$   $\frac{1}{x^2}$



$\int$   $x$  ;  $A_1 =$

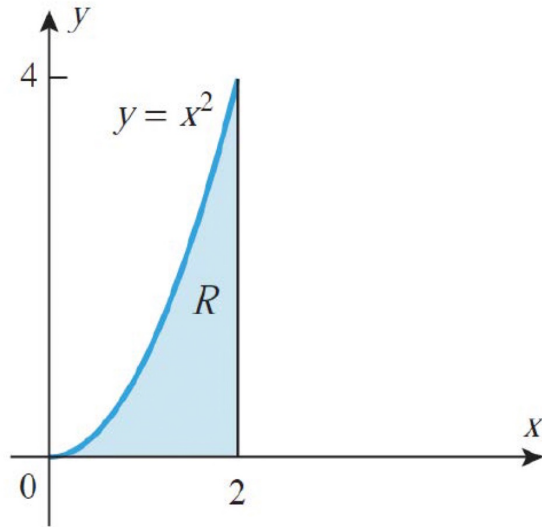
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$\int$   $y$  ;  $A_2 =$

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กำหนดพื้นที่ผิว

พื้นที่ผิว  
  
 จงหาปริมาตร  $\int$



1) จงหาปริมาตร  $\times$  (Disk)

$$V =$$


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2) จงหาปริมาตร  $\times$  (Shell)

$$V =$$


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3)  $\eta_{\text{max}} = \eta_{\text{min}}$  y (Disk)

$$V =$$

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4)  $\eta_{\text{max}} = \eta_{\text{min}}$  y (Shell)

$$V =$$

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5)  $\eta_{\text{max}} = \eta_{\text{min}}$  ✓ x = 2 (Disk)

$$V =$$

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## Improper Integral

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1) Find  $\int_0^2 \frac{1}{x(\ln x)^3} dx$

$$\int_0^2 \frac{1}{x(\ln x)^3} dx =$$

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$$\int_1^{+\infty} \frac{4}{x^2 - x} dx =$$

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2)  $\int_2^3 \frac{1}{x-2} dx$  Find the value