

```
syms x a positive
y(x)=a*x^2
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$$y(x) = a x^2$$

```
eq=4==y(6)
```

$$\text{eq} = 4 = 36 a$$

```
a=solve(eq,a)
```

$$a = \frac{1}{9}$$

```
y(x)=subs(y)
```

$$y(x) = \frac{x^2}{9}$$

```
z=y/a
```

$$z(x) = x^2$$

```
sol=pi*int(z,0,4)
```

$$\text{sol} = \frac{64 \pi}{3}$$

```
sol=round(sol)
```

$$\text{sol} = 67$$

```
clear
syms x1 x2 x3 x4 x5 x6 x7 y1 y2 y3 y4 y5 y6 y7 h a b
h=0.33
```

$$h = 0.3300$$

```
x1=0
```

$$x1 = 0$$

```
y1=0
```

$$y1 = 0$$

```
y2=0.1090
```

$$y2 = 0.1090$$

$$x_2=0.33$$

$$x_2 = 0.3300$$

$$x_3=2/3$$

$$x_3 = 0.6667$$

$$y_3=0.4122$$

$$y_3 = 0.4122$$

$$x_4=1$$

$$x_4 = 1$$

$$y_4=0.8417$$

$$y_4 = 0.8417$$

$$x_5=4/3$$

$$x_5 = 1.3333$$

$$y_5=1.2946$$

$$y_5 = 1.2946$$

$$x_6=5/3$$

$$x_6 = 1.6667$$

$$y_6=1.6503$$

$$y_6 = 1.6503$$

$$x_7=2$$

$$x_7 = 2$$

$$y_7=1.8184$$

$$y_7 = 1.8184$$

$$a=0$$

$$a = 0$$

$$b=2$$

$$b = 2$$

$$I=h/3*(y_1+y_7+4*(y_2+y_4+y_6)+2*(y_3+y_5))$$

$$I = 1.7200$$

$$\text{double}(I)$$

$$\text{ans} = 1.7200$$

