



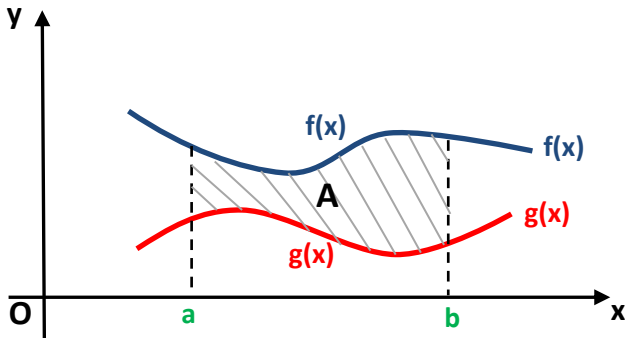
Soru

Çözümleri:

1-2-3

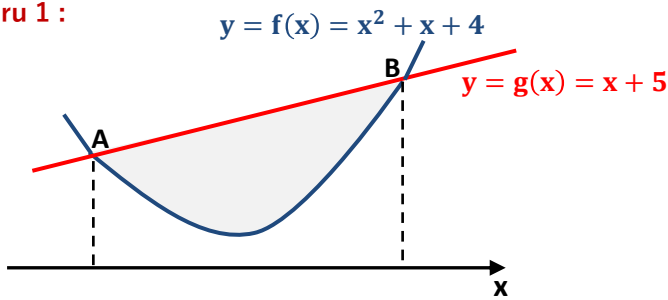
4-5-6

7-8



$$A = \int_a^b (f(x) - g(x)) dx$$

Soru 1 :

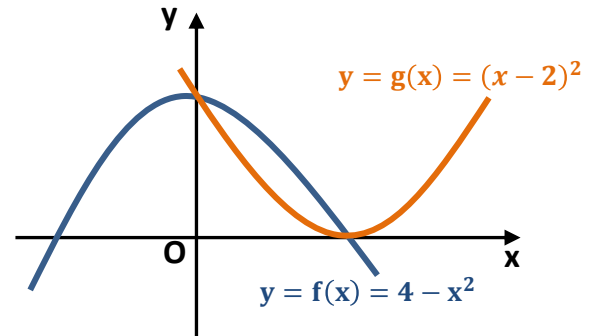


Yukarıdaki şekilde doğru ve parabol arasında kalan alan kaç  $br^2$  dir?

Çözüm :

$$\text{Cevap : } \frac{4}{3}$$

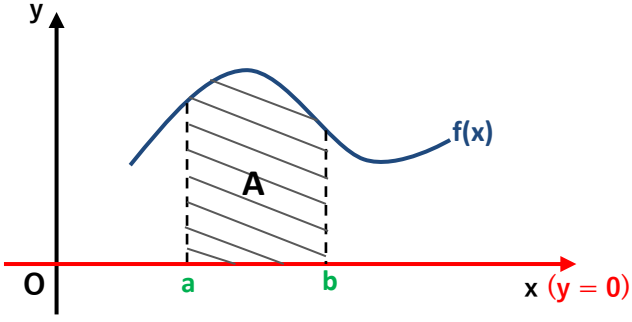
Soru 2 :



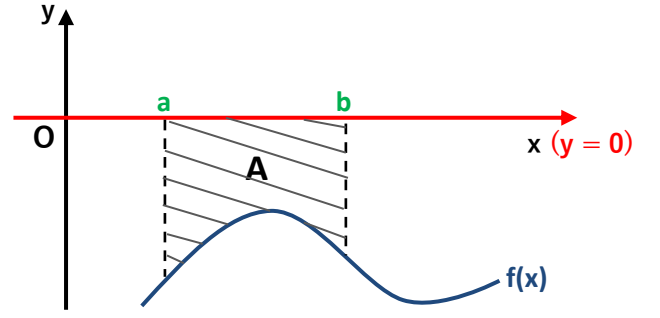
Yukarıdaki şekilde iki parabol arasında kalan alan kaç  $br^2$  dir?

Çözüm :

$$\text{Cevap : } \frac{8}{3}$$

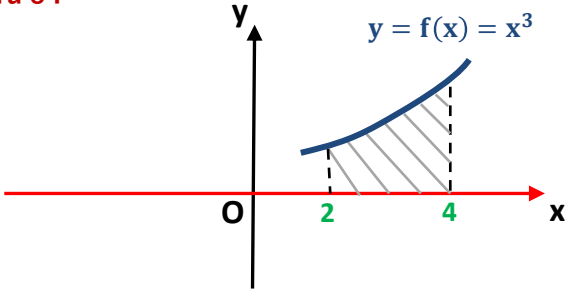


$$A = \int_a^b (f(x) - 0) dx$$



$$A = \int_a^b (0 - f(x)) dx = - \int_a^b f(x) dx$$

Soru 3 :

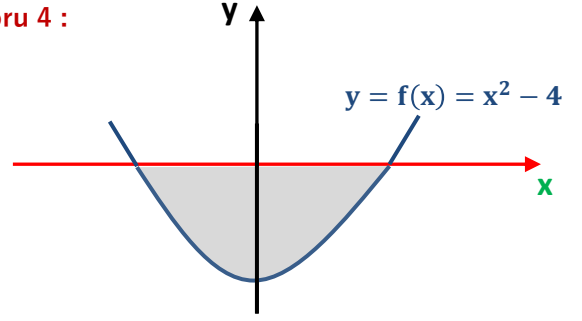


Yukarıdaki şekilde eğri ve x eksenini arasında kalan alan kaç  $br^2$  dir?

Çözüm :

Cevap : 60

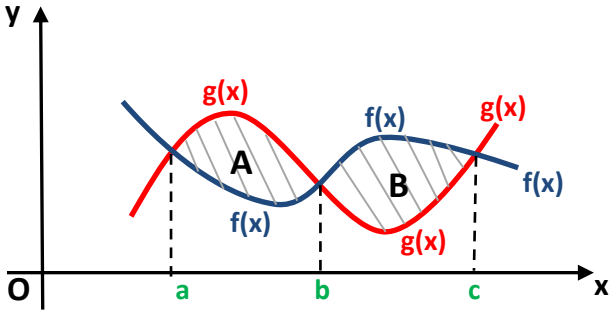
Soru 4 :



Yukarıdaki şekilde x eksenini ve parabol arasında kalan alan kaç  $br^2$  dir?

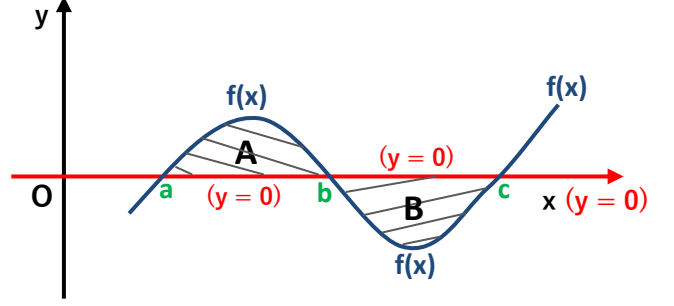
Çözüm :

Cevap :  $\frac{32}{3}$



$$A = \int_a^b (g(x) - f(x)) dx$$

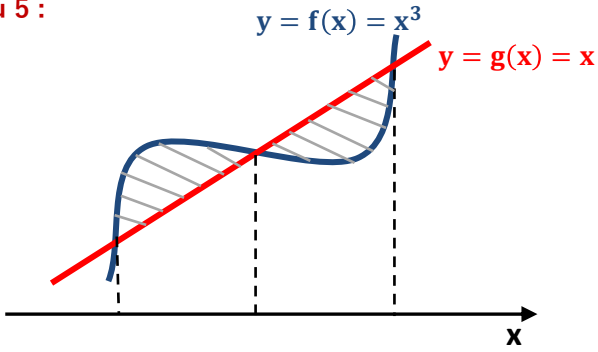
$$B = \int_b^c (f(x) - g(x)) dx$$



$$A = \int_a^b (f(x) - 0) dx$$

$$B = \int_b^c (0 - f(x)) dx$$

Soru 5 :



Yukarıdaki şekilde taralı alanlar toplamı kaç  $br^2$  dir?

Çözüm :

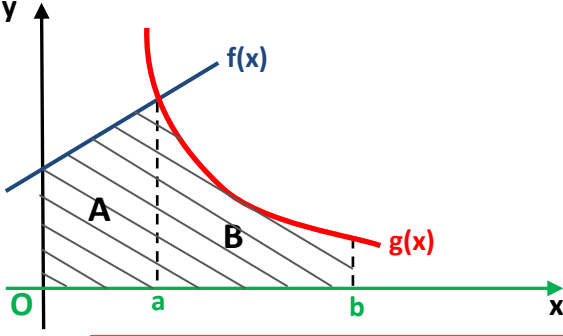
$$\text{Cevap : } \frac{1}{2}$$

Soru 6 :

$y = x^3 - x^2 - 2x$  eğrisi ve x eksenini arasında kalan alan kaç  $br^2$  dir.

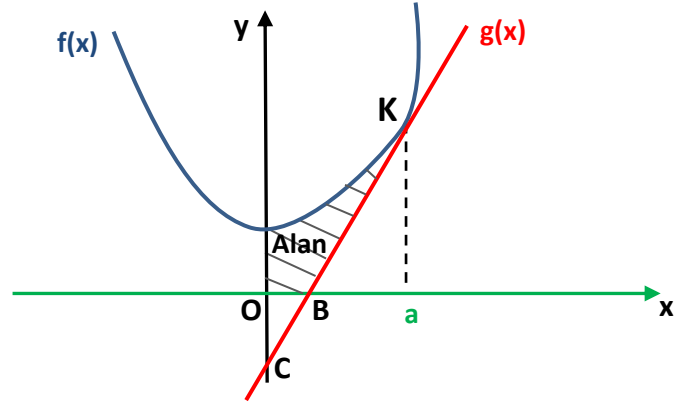
Çözüm :

$$\text{Cevap : } \frac{37}{12}$$



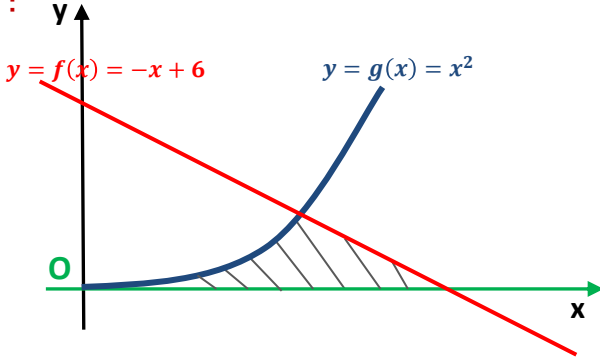
$$A = \int_0^a (f(x) - 0) dx$$

$$B = \int_a^b (g(x) - 0) dx$$



$$\text{Alan} = \int_0^a (f(x) - g(x)) dx - A(\text{OBC})$$

Soru 7 :

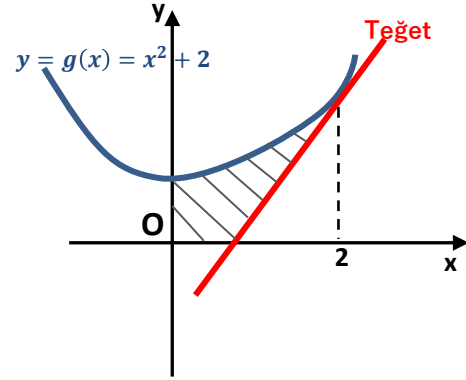


Yukarıdaki şekilde taralı alan kaç  $br^2$  dir?

Çözüm :

$$\text{Cevap : } \frac{32}{3}$$

Soru 8 :



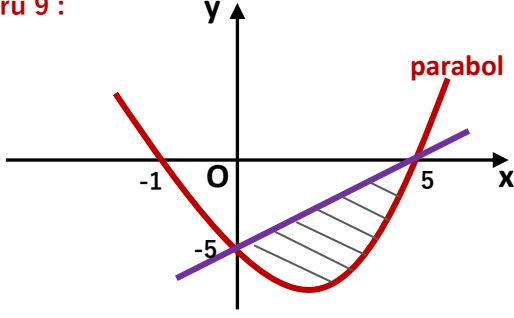
Yandaki şekilde parabolün  $x = 2$  deki teğeti çizilmiştir. Buna göre taralı alan kaç  $br^2$  dir?

Çözüm :

$$\text{Cevap : } \frac{13}{6}$$

## Denklem Çıkarılması Gereken Sorular

Soru 9 :

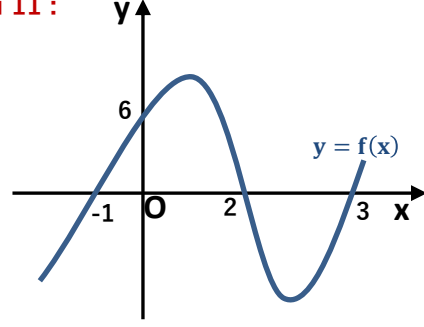


Yukarıdaki şekilde taralı alan kaç  $br^2$  dir?

Çözüm :

Cevap :  $\frac{125}{6}$

Soru 11 :

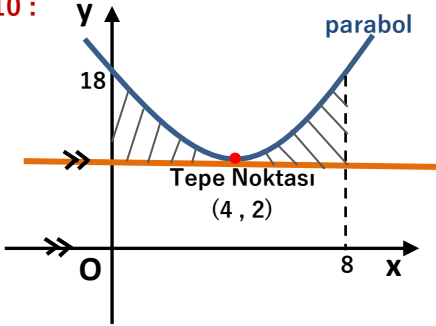


Yukarıdaki şekilde 3. derece polinom fonksiyonu ve x eksenini arasında kalan alanlar toplamı kaç  $br^2$  dir?

Çözüm :

Cevap :  $\frac{71}{6}$

Soru 10 :

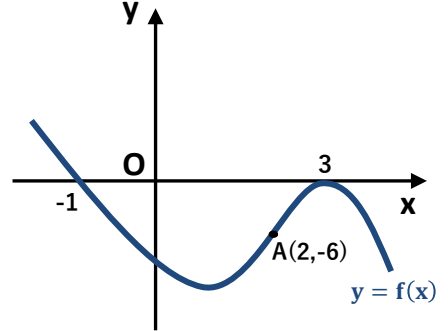


Yukarıdaki şekilde taralı alan kaç  $br^2$  dir?

Çözüm :

Cevap :  $\frac{256}{6}$

Soru 12 :



Yukarıdaki şekilde  $f(x)$  polinom fonksiyonu ve x eksenini arasında kalan alan kaç  $br^2$  dir?

Çözüm :

Cevap :  $\frac{128}{3}$

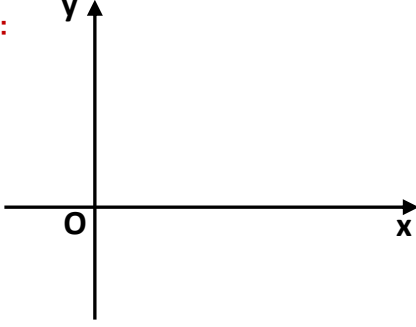
Soru  
Çözümleri:  
9-10-11  
12



## Grafik Çizimi Yapılması Gereken Sorular

**Soru 13 :**  $y = x^2 + 1$  parabolü,  $x = 3$  doğrusu ve eksenler arasında kalan kaç  $br^2$  dir?

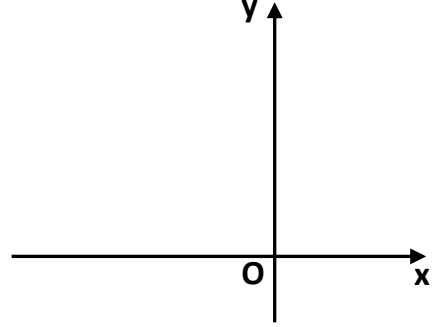
**Çözüm :**



**Cevap : 12**

**Soru 15 :**  $y = x^2 + 2x + 2$  parabolü ve  $y = 2$  doğrusu arasında kalan alan kaç  $br^2$  dir?

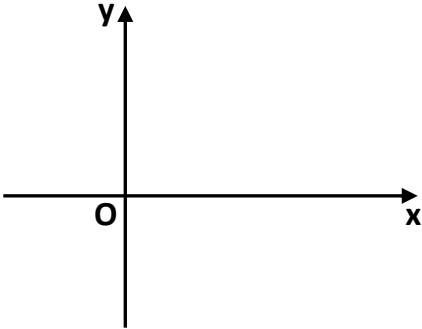
**Çözüm :**



**Cevap :  $\frac{4}{3}$**

**Soru 14 :**  $y = x^2 - 6x + 5$  parabolü  $x = 1$   $x = 4$  doğruları ve x eksenini arasında kalan alan kaç  $br^2$  dir?

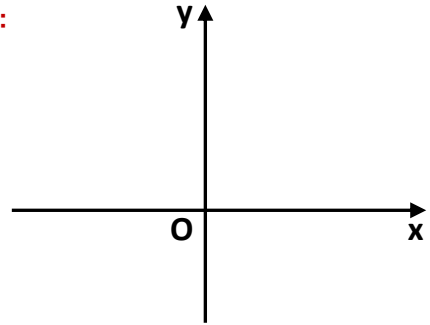
**Çözüm :**



**Cevap : 9**

**Soru 16 :**  $y = |x^2 - 3x - 4|$  eğrisi ve x eksenini arasında kalan kaç  $br^2$  dir?

**Çözüm :**



**Cevap :  $\frac{125}{6}$**

Soru  
Çözümleri:  
13-14-15  
16



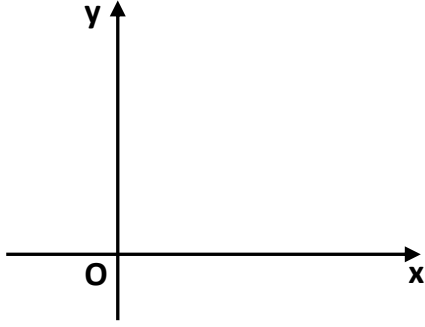
## Grafik Çizimi Yapılması Gereken Sorular

Soru  
Çözümleri:  
17-18-19-20



**Soru 17 :**  $y = x^3$  eğrisi,  $y = 8$  doğrusu ve y eksenini arasında kalan alan kaç  $br^2$  dir?

**Çözüm:**

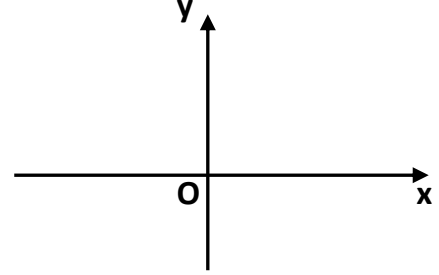


**Cevap : 12**

**Soru 19 :**  $y = \begin{cases} x + 1 & x < 1 \\ x^2 + 1 & x \geq 1 \end{cases}$  eğrisi,

$x = -1$  ve  $x = 3$  doğruları ve x eksenini arasında kalan alan kaç  $br^2$  dir

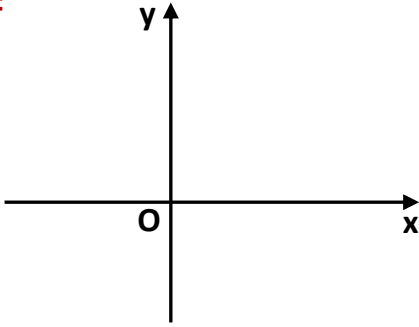
**Çözüm :**



**Cevap :  $\frac{38}{3}$**

**Soru 18 :**  $y = x^3 - 4x$  eğrisi,  $x = -1$  ve  $x = 2$  doğruları ve x eksenini arasında kalan alan kaç  $br^2$  dir?

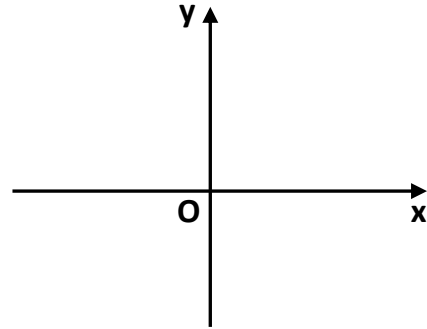
**Çözüm:**



**Cevap : 9**

**Soru 20 :**  $y = |x^2 - |2x||$  eğrisi, ve x eksenini arasında kalan alan kaç  $br^2$  dir

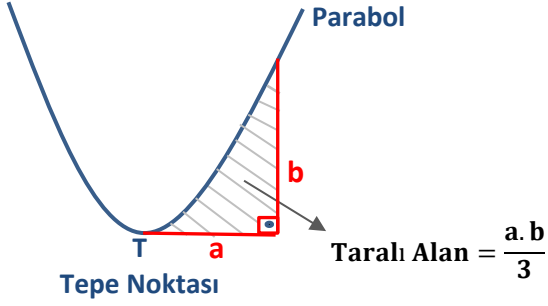
**Çözüm:**



**Cevap :  $\frac{8}{3}$**

## Parabol'ün Yamacındaki Alan

Soru  
Çözümleri:  
21-22-23  
24-25



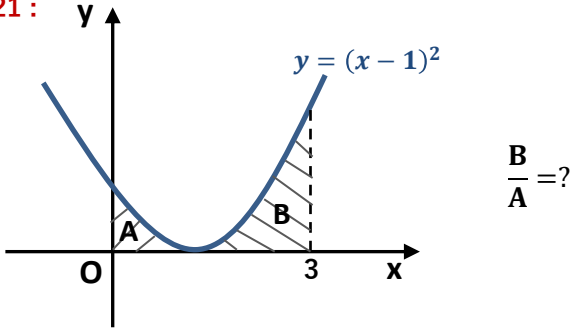
Soru 23 :



Çözüm:

Cevap :  $\frac{27}{6}$

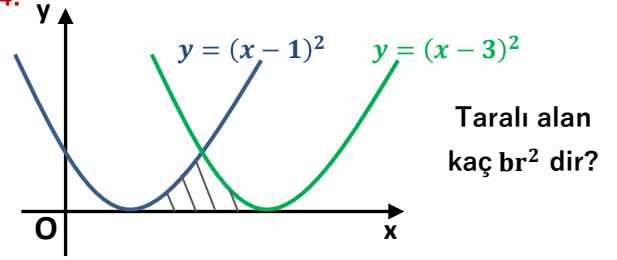
Soru 21 :



Çözüm:

Cevap : 8

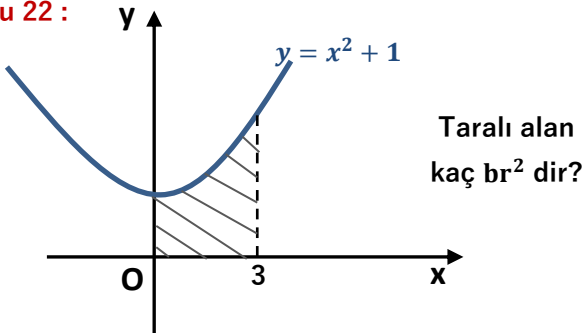
Soru 24:



Çözüm :

Cevap :  $\frac{2}{3}$

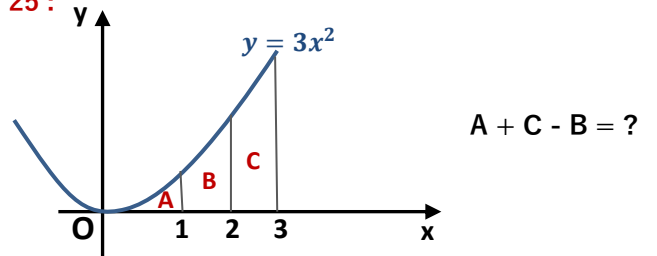
Soru 22 :



Çözüm:

Cevap : 12

Soru 25 :

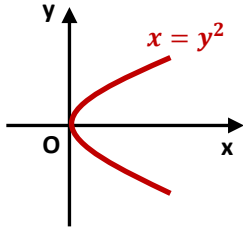
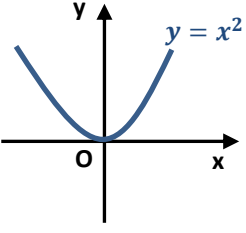


Çözüm:

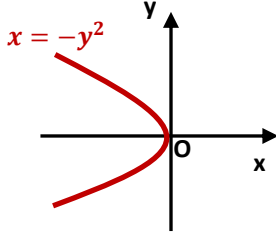
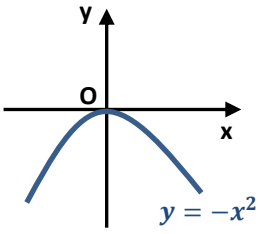
Cevap : 13



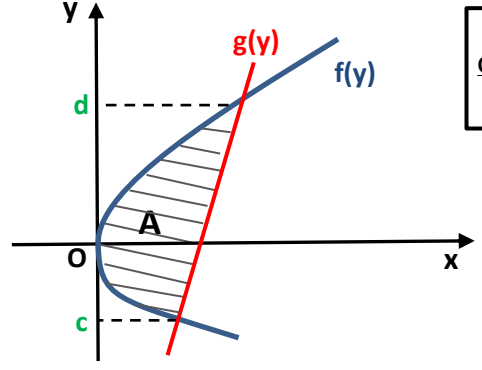
## Yeni Model Paraboller



Soru  
Çözümleri:  
26-27



## "y" ye göre integral alınan sorular

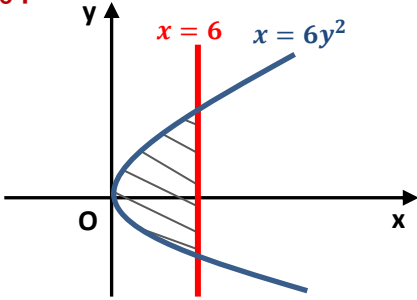


Soru  
Çözümleri:  
28-29



$$A = \int_c^d (g(y) - f(y)) dy$$

Soru26 :



Taralı alan  
kaç br<sup>2</sup> dir?

Çözüm :

Cevap : 8

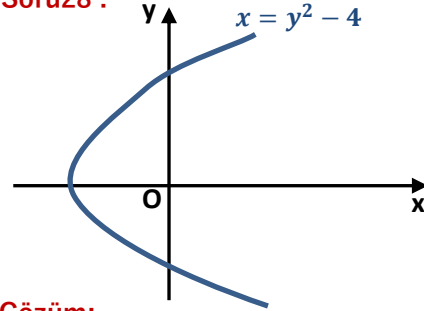
Soru27 :

$y = x^2$  ve  $x = 8y^2$   
parabolleri arasında kalan aln kaç br<sup>2</sup> dir?

Çözüm:

Cevap :  $\frac{1}{24}$

Soru28 :

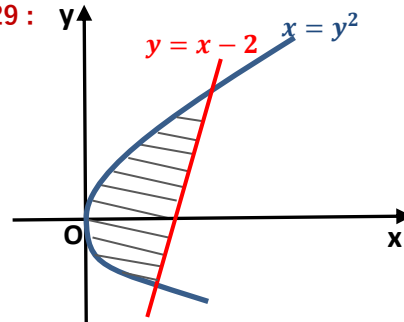


Parabol ve y  
ekseni  
arasında  
kalan alan  
kaç br<sup>2</sup> dir?

Çözüm:

Cevap :  $\frac{32}{3}$

Soru 29 :



Taralı alan  
kaç br<sup>2</sup> dir?

Çözüm :

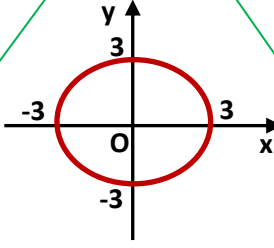
Cevap :  $\frac{9}{2}$

Yarım Çember Denklemi

Soru  
Çözümleri:  
30-31-32  
33-34

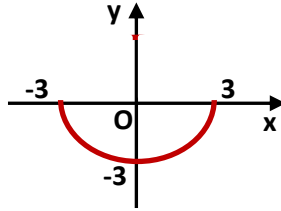
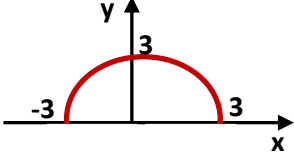


$$x^2 + y^2 = 9$$



$$y = +\sqrt{9 - x^2}$$

$$y = -\sqrt{9 - x^2}$$



Soru 30 :  $\int_{-2}^2 \sqrt{4 - x^2} dx$  integrali kaç eştir?

Çözüm:

Cevap :  $2\pi$

Soru 31 :  $\int_0^6 (\sqrt{36 - x^2} + x) dx$  integrali kaç eştir?

Çözüm :

Cevap :  $9\pi + 18$

Soru 32 :  $\int_0^2 (\sqrt{16 - x^2} - \sqrt{3x}) dx$  integrali kaç eştir?

Çözüm:

Cevap :  $\frac{4\pi}{3}$

Soru: 33 :  $\int_0^2 (\sqrt{8 - x^2} - \sqrt{2x}) dx$  integrali kaç eştir?

Çözüm:

Cevap :  $2 + \pi - 2\sqrt{2}$

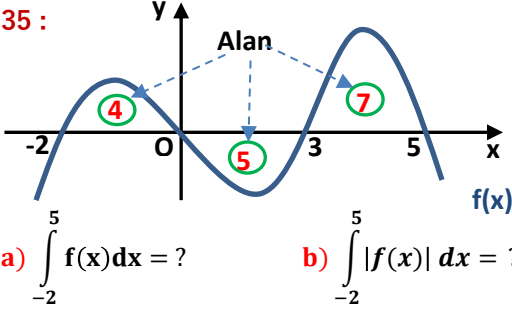
Soru: 34 :  $\int_2^6 \sqrt{-x^2 + 4x + 12} dx$  integrali kaç eştir?

Çözüm:

Cevap :  $4\pi$

## Alan Yorumu Yapılarak Çözülen İntegral Soruları - 1 -

Soru 35 :



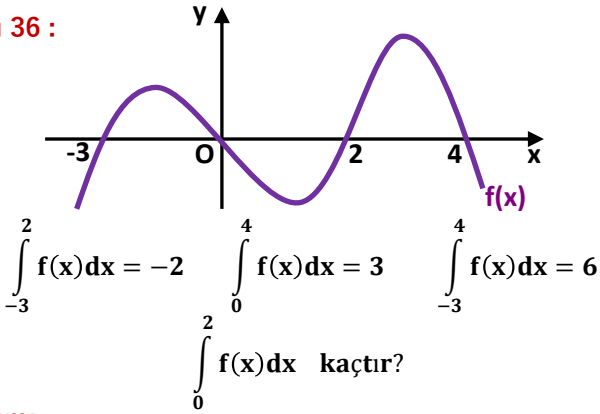
Soru  
Çözümleri:  
35-36-37  
38-39-40



Çözüm:

Cevap : a) 6 b) 16

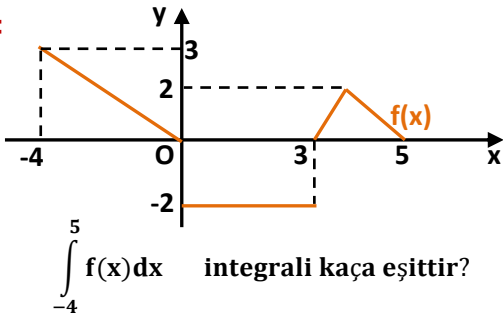
Soru 36 :



Çözüm:

Cevap : -5

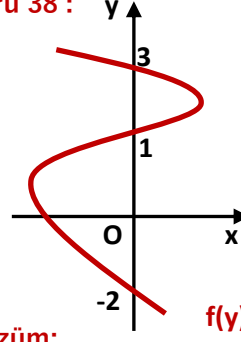
Soru 37 :



Çözüm:

Cevap : 2

Soru 38 :



Çözüm:

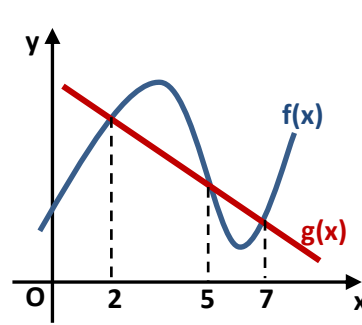
$$3. \int_{-2}^1 |f(y)| dy = 4. \int_1^3 |f(y)| dy$$

$$\int_{-2}^3 f(y) dy = -2$$

$$\int_1^3 f(y) dy \text{ kaçtır?}$$

Cevap : 6

Soru 39 :



Çözüm:

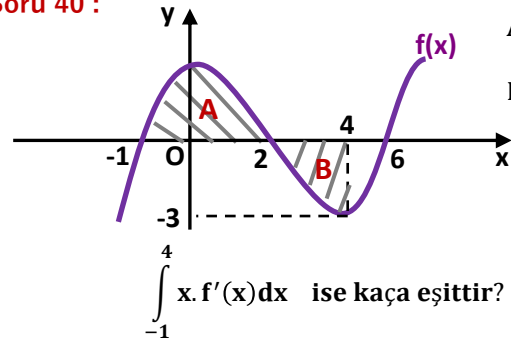
$$\int_5^7 (f(x) - g(x)) dx = -3$$

$$\int_2^7 (f(x) - g(x)) dx = 1$$

$$\int_2^5 (g(x) - f(x)) dx = ?$$

Cevap : -4

Soru 40 :

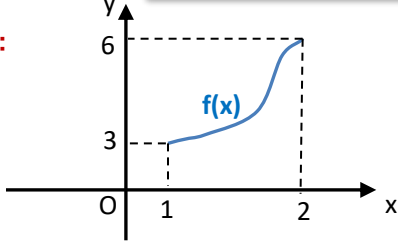


Çözüm:

Cevap : -18

## Alan Yorumu Yapılarak Çözülen İntegral Soruları - 2 -

Soru 41 :



Soru  
Çözümleri:  
41-42-43  
44



$$\int_1^2 f(x)dx + \int_3^6 f^{-1}(x)dx \text{ toplamı kaçtır?}$$

Çözüm:

Soru 43 : Reel sayılarda sürekli ve artan bir  $f(x)$  fonksiyonu için

$$f(-2) = 4 \text{ ve } f(3) = 8 \text{ ise}$$

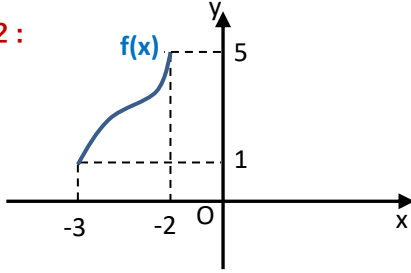
$$\int_{-2}^3 f(x)dx + \int_4^8 f^{-1}(x)dx \text{ toplamı kaçtır?}$$

Çözüm:

Cevap : 9

Cevap : 32

Soru 42 :



$$\int_{-3}^{-2} f(x)dx + \int_1^5 f^{-1}(x)dx \text{ toplamı kaçtır?}$$

Çözüm:

Cevap : -7