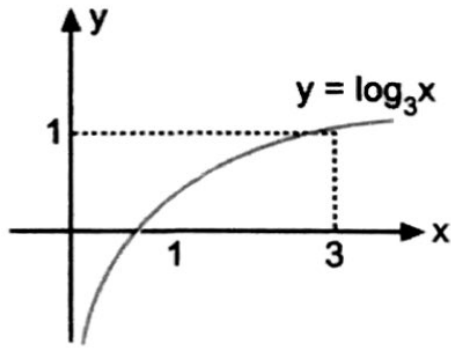
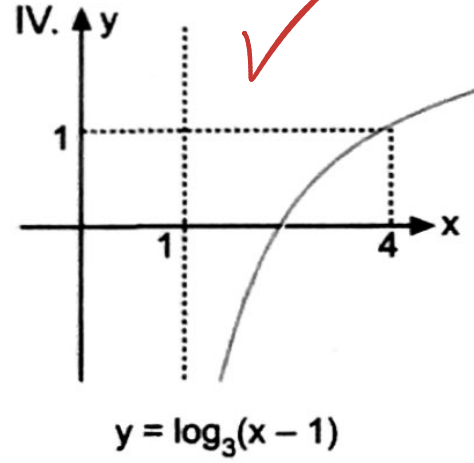
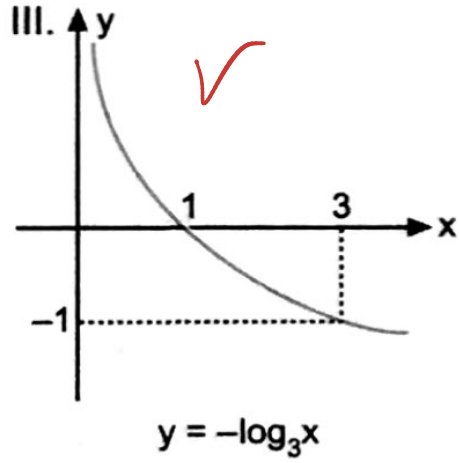
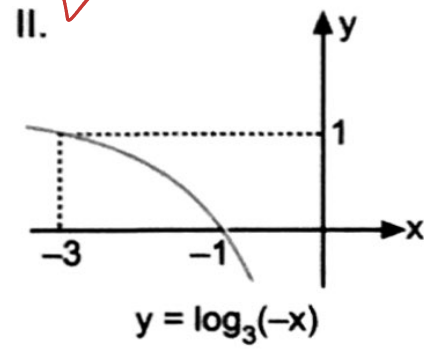
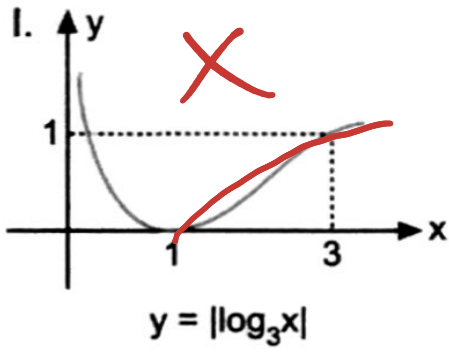


1.



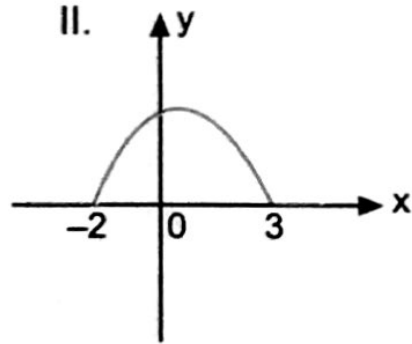
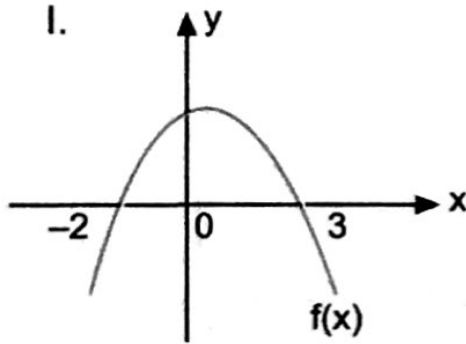
$f: \mathbb{R}^+ \rightarrow \mathbb{R}, f(x) = \log_3 x$
fonksiyonunun grafiği
yanda verilmiştir.

Buna göre, aşağıdaki grafiklerden hangileri doğrudur?



- A) I ve II B) I ve III C) II ve IV
D) I, II ve III E) II, III ve IV

2.



Yukarıdaki I. şekilde $f(x)$ fonksiyonunun grafiği verilmiştir.

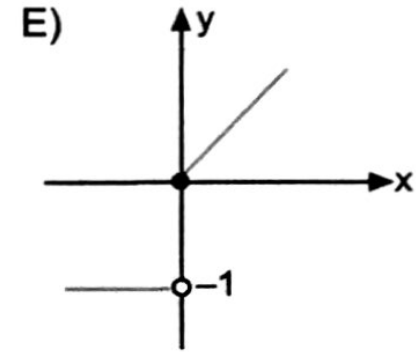
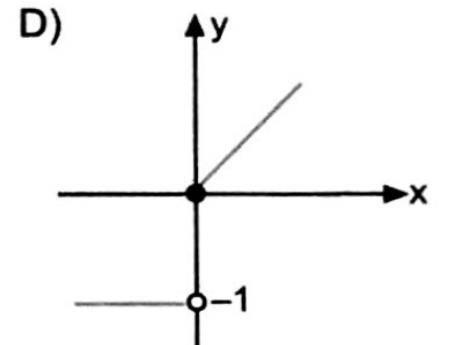
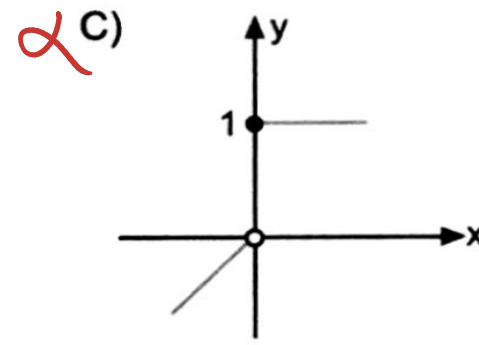
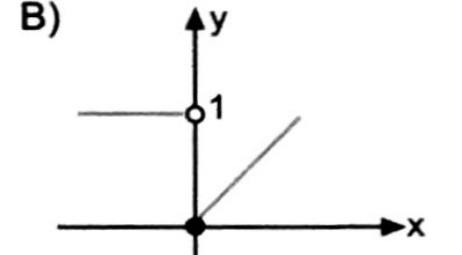
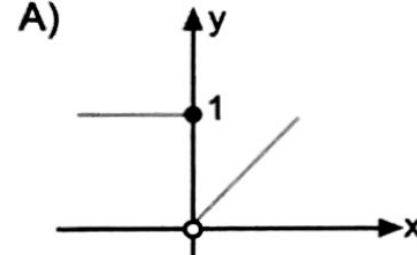
Buna göre, II. şekilde verilen grafik aşağıdakilerden hangisine ait olabilir?

- A) $y = \frac{|f(x)| + f(x)}{2}$ B) $y = |f(x)| + 1$
C) $y = \frac{|f(x)| - f(x)}{2}$ D) $y = x f(x) - 1$
E) $f(x) \geq 0$

3.

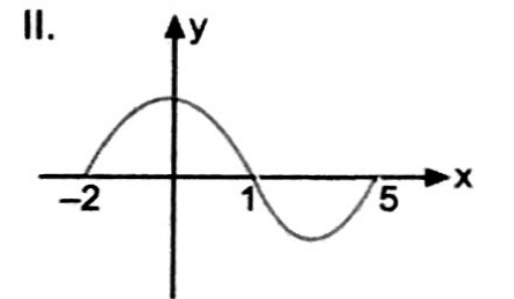
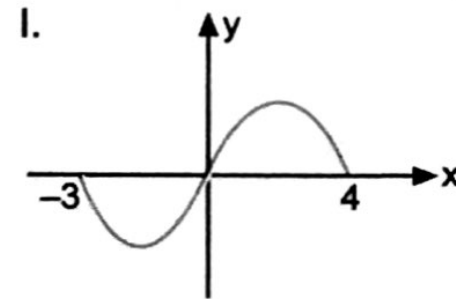
$$f(x) = \begin{cases} x, & x < 0 \text{ ise} \\ 1, & x = 0 \text{ ise} \\ 1, & x > 0 \text{ ise} \end{cases}$$

fonksiyonunun grafiği aşağıdakilerden hangisidir?



karekök

4.



Yukarıdaki I. şekilde $[-3, 4]$ aralığında tanımlı $f(x)$ fonksiyonunun grafiği verilmiştir.

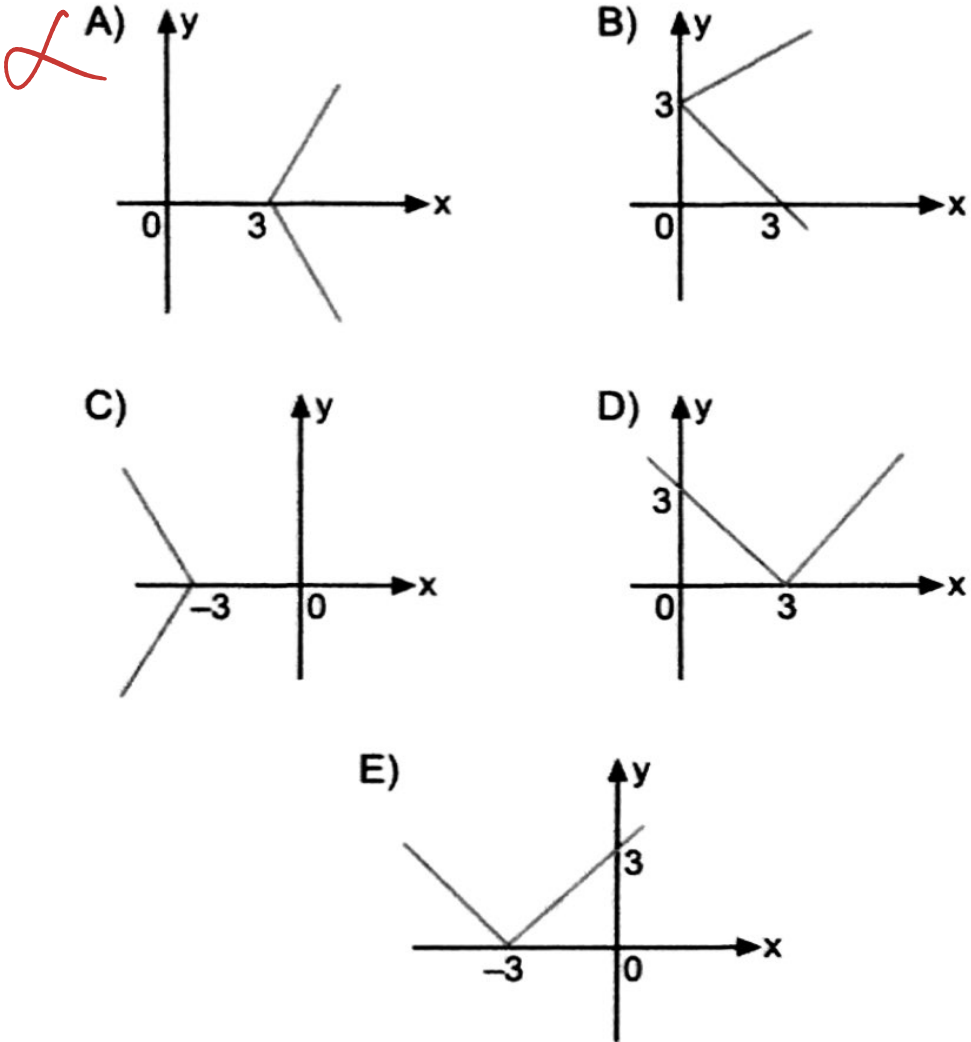
Buna göre, II. şekildeki grafik aşağıdaki fonksiyonlardan hangisine ait olabilir?

- A) $-f(x+1)$ B) $f(-x+1)$ C) $f(x+1)-1$
D) $-f(x-1)$ E) $-f(x)+1$

$$y = -x + 3 \quad | \quad y = x - 3$$

$$\ln\left(\frac{5-x}{x-1}\right) > 0 \Rightarrow \frac{5-x}{x-1} > 1 \Rightarrow \frac{6-2x}{x-1} > 0$$

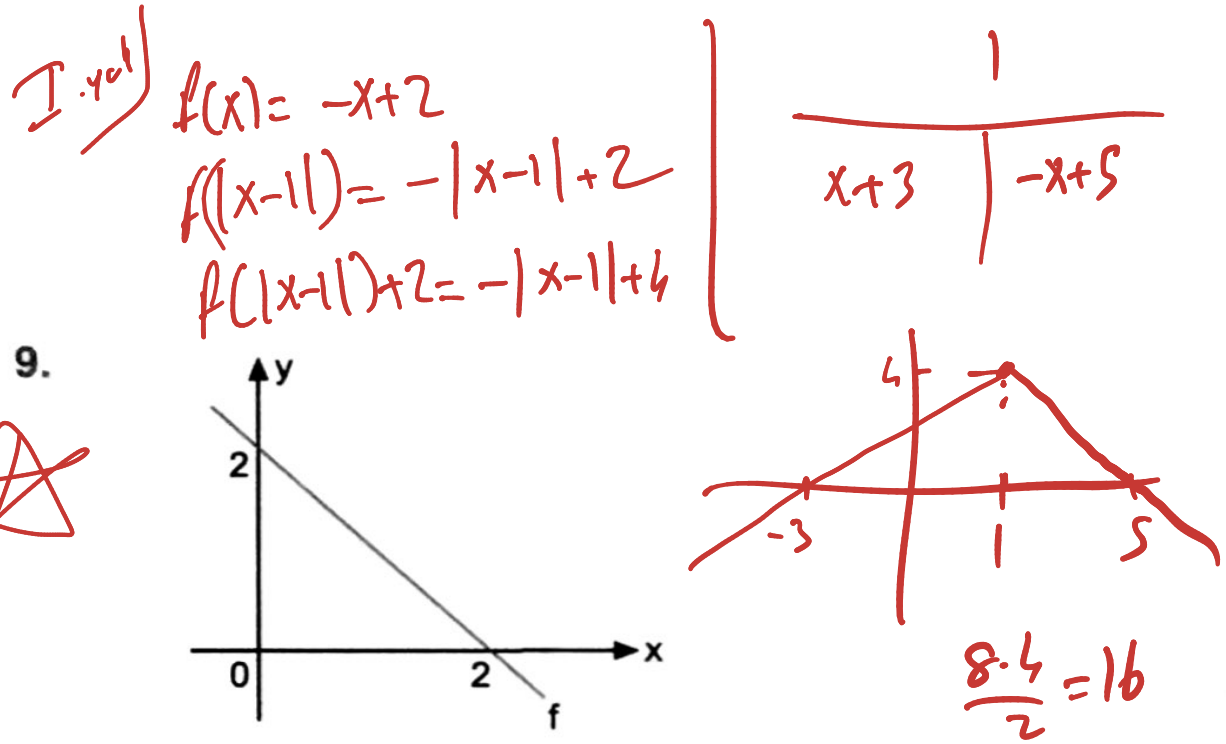
5. $|y| = x - 3$
İlişkisinin grafiği aşağıdakilerden hangisidir?



8. $f(x) = \sqrt{\ln\left(\frac{5-x}{x-1}\right)} + 2x - 8$

fonksiyonunun en geniş tanım aralığı aşağıdakilerden hangisidir?

- A) (1, 5) B) (1, 5] C) (1, 3] D) (1, 3) E) (1, 2]



karekök

6. $f(x) = x^2 - 4x + 1$ fonksiyonu veriliyor. $h(x) = f(x + m)$ fonksiyonu çift fonksiyon olduğuna göre, $h(5)$ kaçtır?

- A) 22 B) 20 C) 18 D) 16 E) 14

$$|2x-1|=7 \Rightarrow 2x-1=7 \vee 2x-1=-7 \Rightarrow x=4 \vee x=-3$$

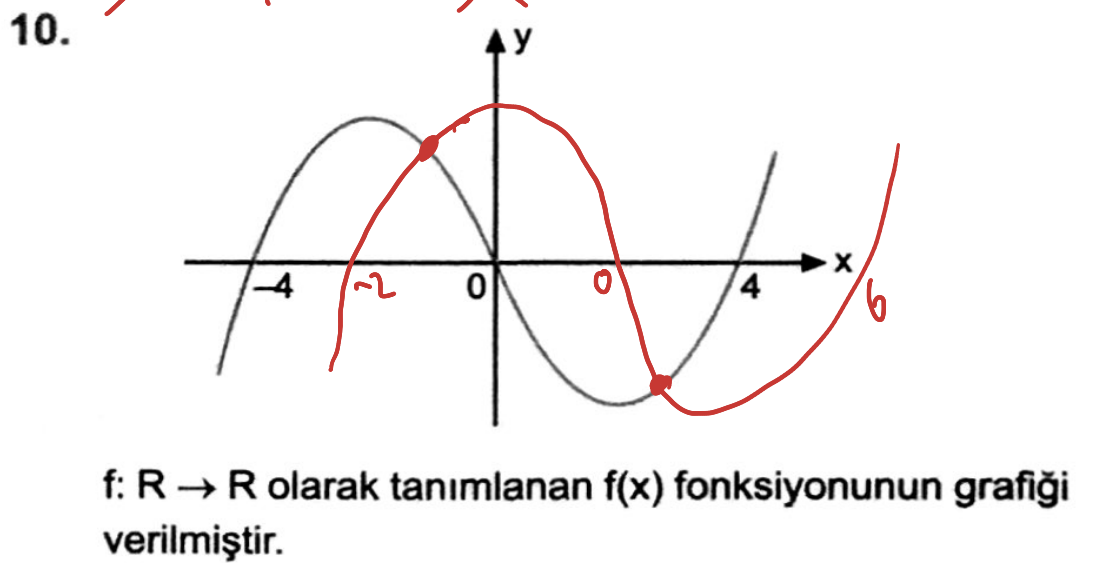
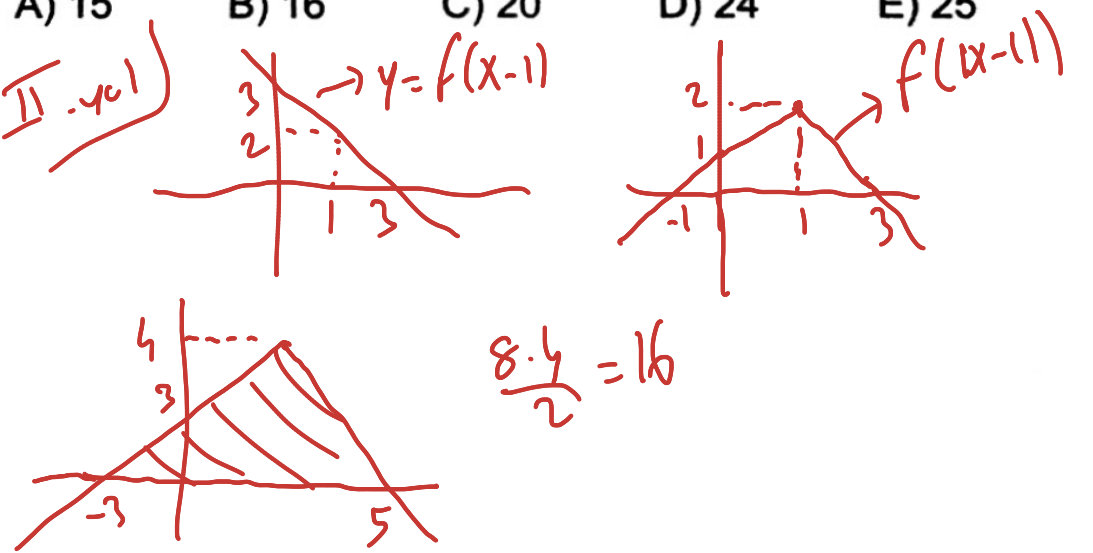
$$||x|+2|=7 \Rightarrow |x|+2=7 \Rightarrow |x|=5 \Rightarrow x=5 \vee x=-5$$

7. $f(x) = \begin{cases} |2x-1|, & x < 1 \\ |x|+2, & x \geq 1 \end{cases}$
şeklinde tanımlanan bir f fonksiyonu için, $f(x) = 7$ denkleminin kökleri toplamı kaçtır?

- A) 1 B) 2 C) 5 D) 7 E) 10

Şekilde $f(x)$ fonksiyonunun grafiği verilmiştir. Buna göre, $f(|x-1|) + 2$ fonksiyonunun grafiği ile x eksenini arasında kalan bölgenin alanı kaç br^2 dir?

- A) 15 B) 16 C) 20 D) 24 E) 25



Buna göre, $f(x) = f(x - 2)$ denkleminin kaç farklı gerçel kökü vardır?

- A) 1 B) 2 C) 3 D) 4 E) 5