

## Harbiylarga tushgan testlar yechimlari

**Misol.** Agar  $81^x = 16$  bo'lsa,  $9^x$  ni toping.

A) 4 B)  $\frac{4}{3}$  C)  $\pm 4$  D)  $\frac{4}{9}$

**Yechish:** Ko'rsatkichli funksiya uchun quyidagilar o'rinli:

$$y = a^x \quad (a > 0, a \neq 1) \rightarrow \begin{cases} D(x) \in (-\infty; \infty), \\ E(y) \in (0; \infty) \end{cases}$$

$$81^x = 16 \Rightarrow 9^{2x} = 4^2 \Rightarrow 9^x = 4.$$

**Javob:** A.

**Misol.**  $n$  - hadining formulasi  $a_n = \frac{13-n}{6}$

bo'lgan arifmetik progressiyaning ayirmasini toping.

A)  $\frac{1}{2}$  B)  $\frac{1}{4}$  C)  $-\frac{1}{6}$  D)  $-\frac{1}{3}$

**Yechish:**  $a_n = a_1 + d(n-1) = a_1 - d + d \cdot n$  ga ko'ra,  $n$  ning oldidagi ko'paytuvchi arifmetik progressiyaning ayirmasi ( $d$ ) bo'ladi.

$$a_n = \frac{13-n}{6} = \frac{13}{6} + \left(-\frac{1}{6}\right) \cdot n.$$

$$d = -\frac{1}{6}.$$

**Javob:** C.

**Misol.**  $a$  va  $b$  sonlar uchun  $a^2 + b^2 = 14ab$

tenglik o'rinli bo'lsa,  $\frac{4 \lg \frac{a+b}{4}}{\lg \frac{1}{a} + \lg \frac{1}{b}}$  ning

qiymatini toping.

A) 1 B) -2 C) 2 D) -1

**Yechish:** Quyidagicha shakl almashtiramiz:

$$\frac{2 \lg \left(\frac{a+b}{4}\right)^2}{\lg \frac{1}{ab}} = \frac{2 \lg \frac{a^2 + b^2 + 2ab}{16}}{-\lg ab} = -2 \frac{\lg \frac{14ab}{16}}{\lg ab} = -2 \frac{\lg ab}{\lg ab} = -2. \text{ ga}$$

**Javob:** B.

**Misol.**  $\vec{a}$  va  $\vec{b}$  nolmas vektorlarning kolleniarlik alomati berilgan javob bu ...

A)  $\vec{a} \cdot \vec{b} = 0$

B)  $\vec{c} = x\vec{a} + y\vec{b} = 0$

C)  $\vec{c} = x\vec{a} - y\vec{b} = 0$

D)  $\vec{b} = k\vec{a}, k \neq 0$

**Yechish:**  $\vec{a}(x_1, y_1)$  va  $\vec{b}(x_2, y_2)$  kollinear vektorlar uchun quyidagi munosabat har doim o'rinli:

$$\frac{x_2}{x_1} = \frac{y_2}{y_1} = k$$

Bundan quyidagini olamiz:

$$\frac{x_2}{x_1} = \frac{y_2}{y_1} = k \Rightarrow x_2 = k \cdot x_1, y_2 = k \cdot y_1$$

$$\vec{b}(x_2, y_2) = \vec{b}(k \cdot x_1, k \cdot y_1) = k\vec{a}(x_1, y_1) \Rightarrow \vec{b} = k\vec{a}$$

**Javob:** D.

“Matematika” fani o'qituvchisi:  
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*SUPER MATEMATIKA*