

LOGARİTMA YAZILI HAZIRLIK ①

* $\log_a b$ $b > 0$
 $a > 0$
 $a \neq 1$

* $\log_a a = 1$ $\log 1 = 0$

* $\log_a a = \log_{10} a$ $\ln a = \log_e a$

* $\log_{a^m} b^n = \frac{n}{m} \log_a b$

* $\log_a b = x$ $b = a^x$
 kalbi

* Tabanlar farklı ise testere

$$\log_a b = \frac{\log_x b}{\log_x a}$$

$$\log x + \log y = \log (x \cdot y)$$

$$\log x - \log y = \log \left(\frac{x}{y} \right)$$

$$\log (x+y) = \log (x+y)$$

$$\log_y^x \cdot \log_x^m = \log_y^m$$

$$\frac{\log_y^x}{\log_y^m} = \log_y^x \cdot \log_m^y \cdot \log_m^x$$

Örnek $\log_3^2 = x$ $\log_3^5 = y$

$$\log_3^{300} = \log_3^{(2^2 \cdot 5^2 \cdot 3)}$$

$$\log_3^{2^2} + \log_3^{5^2} + \log_3^3$$

$$\Rightarrow 2x + 2y + 1$$

$$\log_2^3 = x$$

$$\log_3^5 = y$$

$$\log_{15}^6 = ? \quad \frac{\log_3^6}{\log_3^{15}}$$

$$\frac{\log_3^2 + \log_3^3}{\log_3^5 + \log_3^3}$$

$$\Rightarrow \frac{\frac{1}{x} + 1}{y + 1} = \frac{x + 1}{x(y + 1)}$$

* $a^{\log_m^n} = n^{\log_m^a}$

/matematiginguleryuzu

2

$$\log f(x) \leq 1$$

$$C_k = ?$$

Kural $a > 1$ olarak

$$f(x) > 0 \mid f(x) \leq a$$

Örnek $\log_{\frac{1}{3}}(4x-8) > -2$

$$C_k = ?$$

$$-\log_3^{(4x-8)} > -2$$

$$\log_3^{(4x-8)} < 2$$

$$\begin{array}{l|l} 4x-8 > 0 & 4x-8 < 9 \\ x > 2 & x < 17/4 \end{array}$$

/matematiginguleryuzu



#DİZİLER #YAZILI HAZIRLIK 1

$$n = \{1, 2, 3, 4, \dots\}$$

her terimin karşılığı olacak

$$a_n = \begin{cases} \frac{2n+1}{n+2} & n \leq 3 \\ \frac{3n+4}{n} & n > 3 \end{cases}$$

$$\sum_{n=2}^4 a_n = a_2 + a_3 + a_4 = ?$$

$$\frac{5}{4} + \frac{7}{5} + \frac{16}{4} = 4$$

AD

GD

$$\log x + \log y = \log (x \cdot y)$$

$$\log x - \log y = \log \left(\frac{x}{y} \right)$$

$$5 \log x = \log x^5$$

$$+ \quad \text{---} \quad \cdot$$

$$- \quad \text{---} \quad \div$$

$$2r \quad \text{---} \quad r^2$$

$$a_1 + a_2 \quad \text{---} \quad a_1 \cdot a_2$$

$$a_1 - a_2 \quad \text{---} \quad \frac{a_1}{a_2}$$

$$2a_1 \quad \text{---} \quad a_1^2$$

$$10r \quad \text{---} \quad r^{10}$$

AD

GD

$$a_1 - a_2 = a_3 - a_4 \rightarrow \frac{a_1}{a_2} = \frac{a_3}{a_4}$$

$$a_1 + a_7 = 2a_4 \rightarrow a_1 \cdot a_7 = a_4^2$$

$$a_1 + a_7 + a_{13} = 3a_7 \rightarrow a_1 \cdot a_7 \cdot a_{13} = a_7^3$$

$$a_{10} = a_1 + 9r \rightarrow a_{10} = a_1 \cdot r^9$$

$$a_{20} = a_{15} + 5r \rightarrow a_{20} = a_{15} \cdot r^5$$

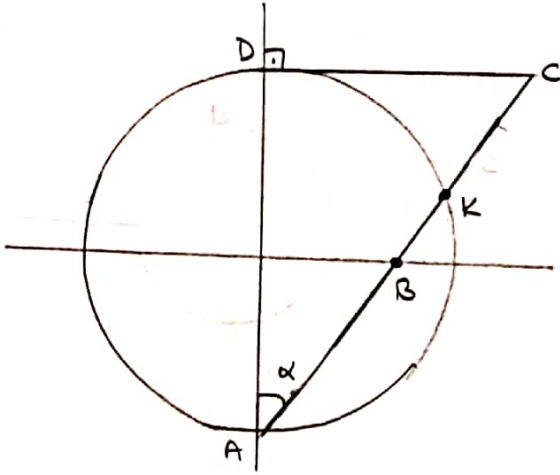
$$1 + r + r^2 + \dots + r^{50}$$

/matematizinguleryuzu



LOGARİTMA DİZİLER YAZILI HAZIRLIK SORULARI

1-)



$$0 < \alpha < 45$$

$$\cos \alpha = ?$$

$$|BK| = \frac{1}{\sqrt{3}}$$

1

2-) $f(x)$ 2. dereceden fonksiyonu,
 $x=3$ doğrusuna göre simet-
riktir.

$$(f \circ f)(1) = a \cdot (3 - f(5))^2$$

$$f(-2) = 150$$

$$f(3) = ?$$

/matematikinguleryuzu

3-)

$$\log_a^b = \frac{3}{4}$$

$$\frac{3 \log a + 2 \log b}{4 \log a - 3 \log b} = ?$$

4-)

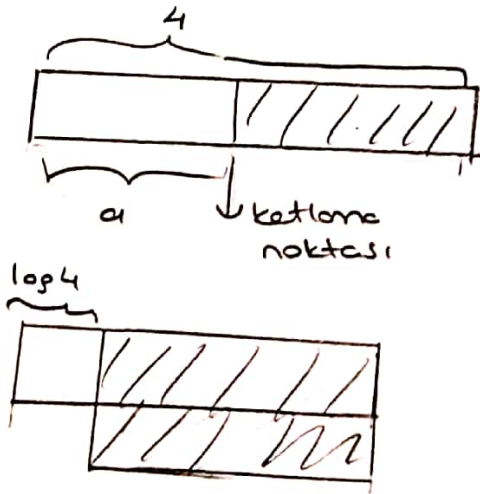
 a_n A.D.

$$2a_4 + a_9 = 57$$

$$a_3 + a_8 = 37$$

$$a_7 = ?$$

5-)



$$a = ?$$

2

6-)

 a_n G.D.

$$\frac{a_7 + a_{12}}{a_2 + a_7} = 32$$

$$a_{10} = \frac{1}{5}$$

$$a_{12} = ?$$

/matematiginguleryuzu

7-)

log_a^b değeri bilinir

$$1) \log_{\left(\frac{a}{b}\right)}^{ab}$$

$$2) \log_a^{(a-b)}$$

$$3) \log_b^{(a \cdot b)}$$

$$4) \log_{ab}^b$$

$$5) \log_{a \cdot b}^{\left(\frac{a}{b}\right)}$$

hangileri bilinir?

8) a_n bir dizi:

$$a_{n+4} \cdot a_{n+3} = a_{n+3} + a_{n+5}$$

$$\left. \begin{array}{l} a_4 = 2 \\ a_5 = 3 \end{array} \right\} a_8 = ?$$

3

6-2

$$b_n = \begin{cases} a_n + a_{n+1} & n \leq 5 \\ b_{n-1} & n > 5 \end{cases}$$

$$b_{2020} - b_4 = 10$$

$$b_1 = 4 \quad \text{ve} \quad a_n \text{ A.D.}$$

$$b_{304} = ?$$

6-1 $x \in \mathbb{R}$

$[x] = "x" \text{ in basamak sayısı} "$

$$\log m = 3,4$$

$$\log n = 2,4$$

$$\frac{[m] + [n]}{\log\left(\frac{n}{m}\right)} = ?$$

/matematikinguleryuzu

6-3 f ve g fonk.

$$f(\log_3(2x+1)) = x-1$$

$$g^{-1}(\log_9(3x+1)) = x+1$$

$$\log_3^{16} = ?$$