APOTEMİ TRİGONOMETRİ MARATON TESTLERİ

TEST 1

1) $-\sin x = -\cos x + \frac{1}{2}$

$c - s = \frac{1}{2}$

$c^2 - 2sc + s^2 = \frac{1}{4}$

$-2sc = \frac{-3}{4}$

$sc = 3/8$

2) $1 - \frac{c}{s} \to s^2 = 3c^2$

$\frac{-c}{s} = 2c^2$

$\frac{-1}{s} = 2c$

$\sin 2x = -1$

3) $1594 \mid 360$
1440
$154°$

$a = \sin 157 . \sin 158$
$= \sin 23 . \sin 22$

$b = \sin 156 . \sin 154$
$= \sin 24 . \sin 26$

$c = \cos 159 . \sin 157$
$= -\cos 21 . \sin 23$

$b > a > c$

4) $\tan x = \frac{1}{4}$ $(x \in 3.\text{bölge})$

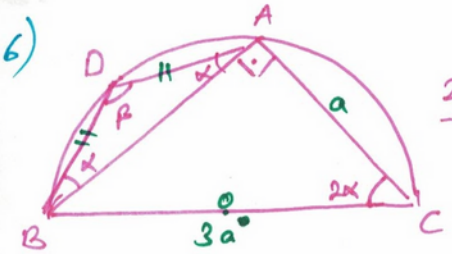
$2 s_x . c_x . s_x = \frac{-72}{125}$

$-\frac{3}{5}$ $-\frac{4}{5}$ $-\frac{3}{5}$

5) Maximin periyodu $\frac{1}{2}$ dir. D//

$a.\sin^{\wedge}(bx+c)$ $\Rightarrow$ $\wedge$ teki ise $\frac{2\pi}{|b|}$

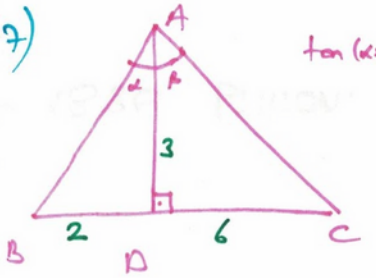
6)



$2\alpha + \beta = 180°$

$\cos 2\alpha = \frac{a}{3a} = \frac{1}{3}$

7)



$\tan(\alpha+\beta) = \frac{t_\alpha + t_\beta}{1 - t_\alpha . t_\beta}$

$= \frac{\frac{2}{3} + 2}{1 - \frac{4}{3}} = \frac{8}{3} . \frac{-3}{1}$

$= -8$

8) $\frac{2c}{1 + \frac{s}{c}} = \frac{2c}{\frac{s+c}{c}} = \frac{2c^2}{s+c}$

$\to \cos 2x = c_x^2 - s_x^2$

$\frac{2c^2 - 1}{s+c} = a$ $= (c-s)(c+s)$

$c - s = a$

$c^2 + s^2 - 2sc = a^2$

$1 - a^2 = \sin 2x$

9) $s^4 = 1 - 2s^2$ $s^2 = t$ olsun

$t^2 + 2t - 1 = 0$

$t^2 + 2t + 1 - 1 - 1 = 0$

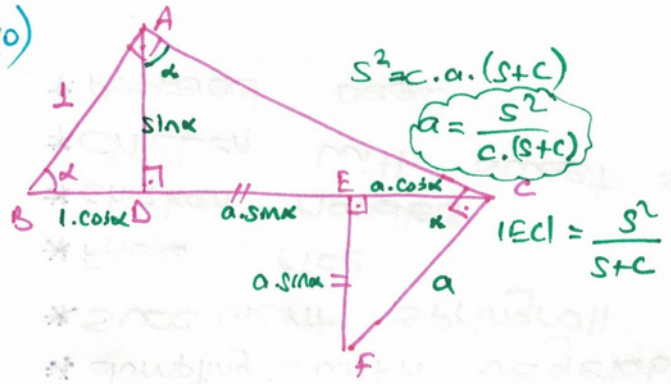
$(t+1)^2 = 2$

$t + 1 = \sqrt{2} \Rightarrow t = \sqrt{2} - 1$

$t + 1 = -\sqrt{2} \Rightarrow t \neq -\sqrt{2} - 1$

$\sin^2 x = \sqrt{2} - 1$

10)



$s^2 = c . a . (s+c)$

$a = \frac{s^2}{c.(s+c)}$

$|EC| = \frac{s^2}{s+c}$

11) $\frac{cc - ss}{cc + ss} = \frac{1}{3} \Rightarrow 3cc - 3ss = cc + ss$

$2cc = 4ss$

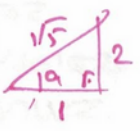
$c_\alpha c_\beta = 2 s_\alpha s_\beta$

$\frac{1}{2} = t_\alpha . t_\beta$

12) $\arcsin \frac{2}{\sqrt{5}} = a$ olsun

$\sin a = \frac{2}{\sqrt{5}}$

$\cos a = \frac{1}{\sqrt{5}}$



13) $2c^2 - c = c^2$

$c^2 - c = 0$

$c(c-1) = 0$

$\cos x \neq 0$ $\cos x = 1$ $\to 0, 2\pi$

1 tane

14) $f(x) = 2.(\cos.C)^3$

$= 2.\left(\frac{\sin 2x}{2}\right)^3$

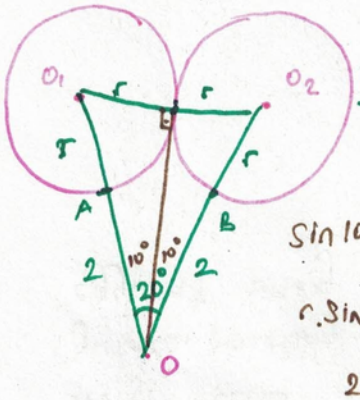
$= \frac{1}{4}.\sin^3 2x$ $\quad \frac{2\pi}{|2|} = \pi$

15) 0 için 1

π için 1

A B C D (E)

$\cos\pi = -1$

16) 

$\frac{360^\circ}{18} = 20^\circ$

$\sin 10^\circ = \frac{r}{r+2}$

$r.\sin 10 + 2\sin 10 = r$

$2.\sin 10 = r - r\sin 10$

$\frac{2\sin 10}{1-\sin 10} = r$

17) $1+\sin x \geq 0$ $\quad \cos x < 0$

y

2. ve 3. bölge

E