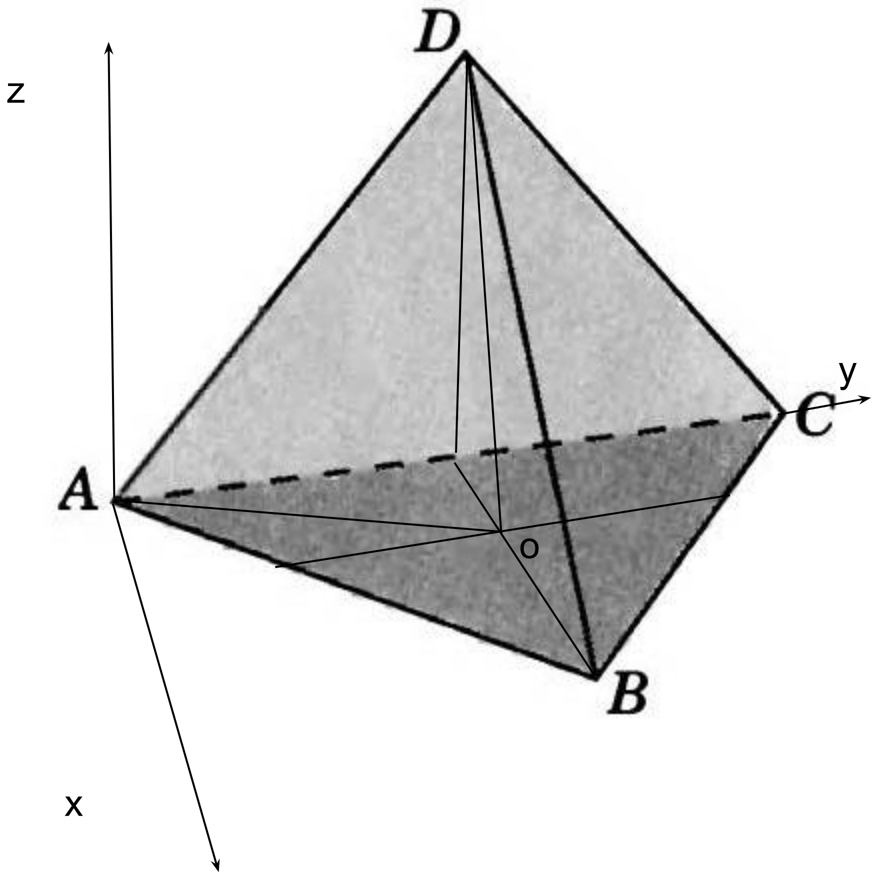
В тетраэдре $ABCD$, все ребра которого равны 1, найдите косинус угла между плоскостями ABC и ACD.



A(0;0;0) C(0;1;0) B(V3/2;½ ; 0)
D(V3/6; ½; V6/3)

AO = V3/3
AD = 1
DO = V(1 - 3/9) = V(⅔) = V6 / 3

AD{V3/6; ½; V6/3} CD{V3/6; -½; V6/3}
AB{V3/2;½ ; 0} AC{0;1;0}
n1{x;y;z}
n2{a;b;c}
1) xV3/6 + y/2 + zV6/3 = 0 | *6
xV3/6 - y/2 + zV6/3 = 0 | *6
x = 1

xV3 + 3y + 2zV6 = 0
xV3 - 3y + 2zV6 = 0

6y = 0
y = 0
x = 1
V3 + 2zV6 = 0
2zV6 = -V3
zV6 = -V3/2
z = -V18 / 12 = -3V2 / 12 = - V2/4
n1{1;0; -V2/4}

n2{a;b;c}
aV3/2 + b/2 = 0
b = 0
c = 1
a = 0
n2{0;0;1}

cos(n1;n2) = (-V2/4) / (V(9/8)*V(1)) =
= (-V2/4) / (3/2V2) = -⅓

OTV: ⅓