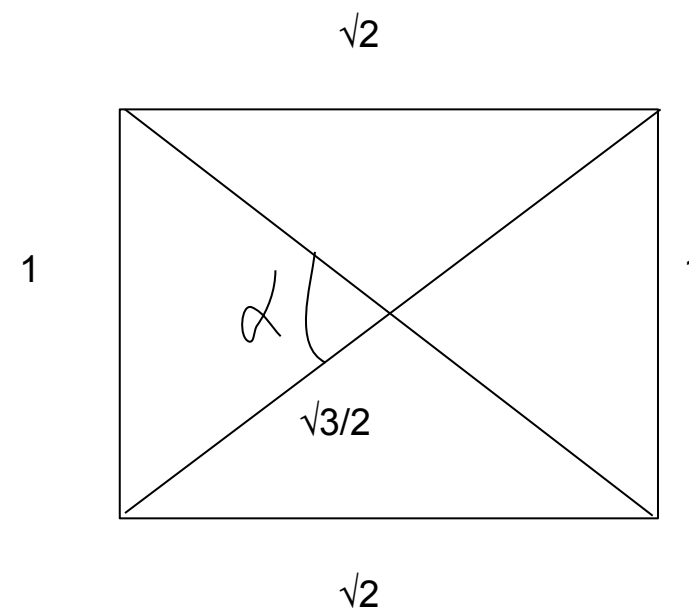
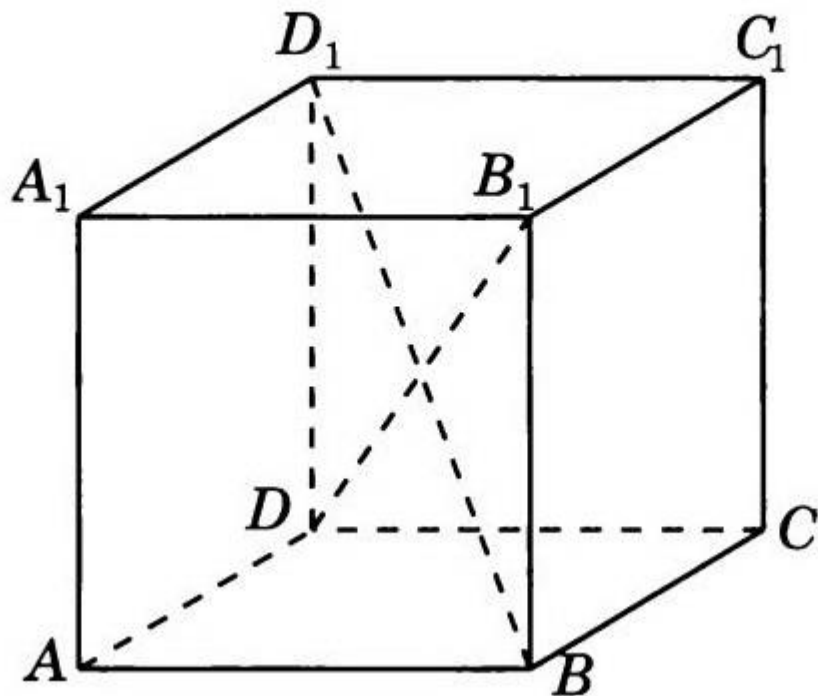


В кубе  $A...D_1$  найдите косинус угла между прямыми  $BD_1$  и  $DB_1$ .



$$DB = D_1B_1 = \sqrt{2}$$

$$DD_1 = BB_1 = 1$$

$$D_1B = DB_1 = \sqrt{3}$$

$$1 = (\sqrt{3}/2)^2 + (\sqrt{3}/2)^2 - 2(\sqrt{3}/2)^2 \cdot \cos(\alpha)$$

$$2(\sqrt{3}/2)^2 \cdot \cos(\alpha) = (\sqrt{3}/2)^2 + (\sqrt{3}/2)^2 - 1$$

$$\cos(\alpha) = ((\sqrt{3}/2)^2 + (\sqrt{3}/2)^2 - 1) / 2(\sqrt{3}/2)^2$$

$$\cos(\alpha) = (3/4 + 3/4 - 1) / (6/4)$$

$$\cos(\alpha) = 1/2 / 3/2 = 1/3$$