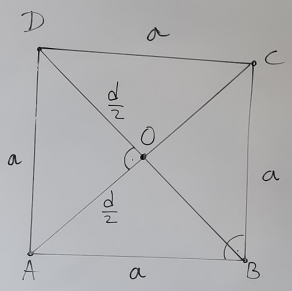
Примена Питагорине теореме на квадрат

Домаћи: 268.

$AC = BD = d$

$AO = BO = CO = DO = \frac{d}{2}$



$2 \cdot d = 2d$

$d \cdot d = d^2$

270.

б) $a = \sqrt{8}$ cm

$d = ?$

$d = a\sqrt{2}$

$d = \sqrt{8} \cdot \sqrt{2}$ cm

$d = \sqrt{8 \cdot 2}$ cm

$d = \sqrt{16}$ cm

$d = 4$ cm

в) $a = 3\frac{1}{3}$ cm

$d = ?$

$d = a\sqrt{2}$

$d = 3\frac{1}{3} \cdot \sqrt{2}$ cm

$d = \frac{10}{3} \cdot \sqrt{2}$ cm

г) $O = 6$ cm

$d = ?$

$O = 4 \cdot a$

$6\text{cm} = 4 \cdot a$

$a = 6\text{cm} : 4$

$a = 1{,}5$ cm или $a = \frac{3}{2}$ cm

$d = a\sqrt{2}$

$d = 1{,}5\sqrt{2}$ cm или $d = \frac{3}{2}\sqrt{2}$ cm

271.

а) $d = \frac{7}{2}\sqrt{2}$ cm

$a = ?$

$a = \frac{d\sqrt{2}}{2} = \frac{\frac{7}{2}\sqrt{2} \cdot \sqrt{2}}{2} = \frac{\frac{7}{2} \cdot 2}{2} = \frac{7}{2}$

$a = \frac{7}{2}$ cm или $a = 3{,}5$ cm

$\triangle ABC$:

$d^2 = a^2 + a^2$

$d^2 = 2a^2$

$d = \sqrt{2a^2} = \sqrt{2} \cdot \sqrt{a^2}$

$|a| = a$

$d = a\sqrt{2}$

$a = \frac{d\sqrt{2}}{2} = \frac{d}{2}\sqrt{2}$

$\triangle AOD$:

$a^2 = \left(\frac{d}{2}\right)^2 + \left(\frac{d}{2}\right)^2$

$a^2 = \frac{d^2}{4} + \frac{d^2}{4} = \frac{1}{4}2d^2$

$a^2 = \frac{d^2}{2}$

$a = \sqrt{\frac{d^2}{2}} = \frac{\sqrt{d^2}}{\sqrt{2}} = \frac{|d|}{\sqrt{2}} = \frac{d}{\sqrt{2}}$

$a = \frac{d}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{d\sqrt{2}}{2}$

$a = \frac{d\sqrt{2}}{2}$