16.11.20. Примена Питагорине теореме на паралелограм и ромб

ромб:

$a^2 = \left(\frac{d_1}{2}\right)^2 + \left(\frac{d_2}{2}\right)^2$

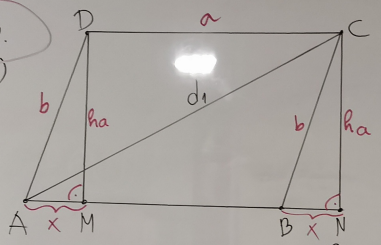
$P = \frac{d_1 \cdot d_2}{2} = a \cdot h$

паралелограм:

$P = a \cdot h_a = b \cdot h_b$

Домаћи: 333. б

333. а)



$AB = a$

$a = AN - BN$

$d_1 = 39\,cm$

$b = 17\,cm$

$h_a = 15\,cm$

$O = ?$

$P = ?$

$\triangle ANC$

$AN^2 = d_1^2 - h_a^2$

$AN^2 = 39^2 - 15^2$

$AN^2 = 1521 - 225$

$AN = \sqrt{1296}$

$AN = 36\,cm$

$\triangle BNC$:

$BN^2 = b^2 - h_a^2$

$BN^2 = 17^2 - 15^2$

$BN^2 = 289 - 225$

$BN^2 = 64$

$BN = \sqrt{64}$

$BN = 8\,cm$

$a = AN - BN$

$a = 36\,cm - 8\,cm$

$a = 28\,cm$

$O = 2 \cdot a + 2 \cdot b$

$O = 2 \cdot 28\,cm + 2 \cdot 17\,cm$

$O = 56\,cm + 34\,cm$

$O = 90\,cm$

$P = a \cdot h_a$

$P = 28\,cm \cdot 15\,cm$

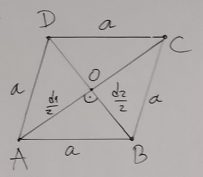
$P = 420\,cm^2$

332. $P = 96\,m^2$

$d_1 = 8\,m$

$d_2 = ?$

$O = ?$



$P = \frac{d_1 \cdot d_2}{2}$

$2P = d_1 \cdot d_2$

$2 \cdot 96 = 8 \cdot d_2$

$192 = 8 \cdot d_2$

$d_2 = 192 : 8$

$d_2 = 24\,m$

$a^2 = \left(\frac{d_1}{2}\right)^2 + \left(\frac{d_2}{2}\right)^2$

$a^2 = 4^2 + 12^2$

$a^2 = 16 + 144$

$a^2 = 160$

$a = \sqrt{160}$

$a = \sqrt{16 \cdot 10}$

$a = 4\sqrt{10}$

$O = 4 \cdot a$

$O = 16\sqrt{10}\,m$