

Plakati s radionica

MATEMATIKA

MATEMATIKA U ZAGREBU



izračunati površinu i opseg mnogokuta i kružnice: pločnik u blizini OS "Izdinka Kršnjavoga" - česterokut a=6,5 cm

$$P = 2 \cdot \frac{a \cdot \sqrt{3}}{2} = a \cdot \sqrt{3}$$

$$P = 6,5 \cdot \sqrt{3} \approx 11,25 \text{ cm}^2$$

$$O = 4 \cdot a = 4 \cdot 6,5 = 26 \text{ cm}$$

Maketa Zagreba - česterokut a=766 cm

$$P = 2 \cdot \frac{a \cdot \sqrt{3}}{2} = a \cdot \sqrt{3}$$

$$P = 766 \cdot \sqrt{3} \approx 1330 \text{ cm}^2$$

$$O = 4 \cdot a = 4 \cdot 766 = 3064 \text{ cm}$$



Maketa Zagreba - kvad na Muzeju Mimara - pravokutnik a=5,5 cm, b=4 cm

$$P = a \cdot b = 5,5 \cdot 4 = 22 \text{ cm}^2$$

$$O = 2 \cdot (a + b) = 2 \cdot (5,5 + 4) = 19 \text{ cm}$$



Paviljon na Zrinjescu - česterokut unutar osmerokuta a=183,5 cm, a=355 cm
Koliko je postotak površine zauzima česterokut u osmerokutu?

ČESTEROKUT

$$P = 2 \cdot \frac{a \cdot b}{2} = a \cdot b = 183,5 \cdot 355 = 65142,5 \text{ cm}^2$$

OSMEROKUT

$$P = 2 \cdot \frac{(1 + \sqrt{2}) \cdot a^2}{2} = (1 + \sqrt{2}) \cdot a^2$$

$$P = (1 + \sqrt{2}) \cdot 183,5^2 \approx 75200 \text{ cm}^2$$

$$\% = \frac{65142,5}{75200} \cdot 100 \approx 86,6\%$$



Oktagon - osmerokut
a) a=447,5 cm
b) a=483,5 cm
c) a=511 cm

a) $P = 2 \cdot \frac{(1 + \sqrt{2}) \cdot a^2}{2} = (1 + \sqrt{2}) \cdot a^2$
 $P = (1 + \sqrt{2}) \cdot 447,5^2 \approx 366812 \text{ cm}^2$

b) $P = (1 + \sqrt{2}) \cdot 483,5^2 \approx 416082 \text{ cm}^2$

c) $P = (1 + \sqrt{2}) \cdot 511^2 \approx 456082 \text{ cm}^2$

Fontana ispred zagrebačke katedrale - osmerokut a=483 cm

$$P = 2 \cdot \frac{(1 + \sqrt{2}) \cdot a^2}{2} = (1 + \sqrt{2}) \cdot a^2$$

$$P = (1 + \sqrt{2}) \cdot 483^2 \approx 416082 \text{ cm}^2$$

$$O = 4 \cdot a = 4 \cdot 483 = 1932 \text{ cm}$$



$$P = 2 \cdot \frac{(1 + \sqrt{2}) \cdot a^2}{2} = (1 + \sqrt{2}) \cdot a^2$$

$$P = (1 + \sqrt{2}) \cdot 230 \cdot 230 \approx 425060 \text{ cm}^2$$



Manduševac - osmerokut a=552 cm



Manduševac - kružnica promjer=450 cm



$$P = 2 \cdot \frac{(1 + \sqrt{2}) \cdot a^2}{2} = (1 + \sqrt{2}) \cdot a^2$$

$$P = (1 + \sqrt{2}) \cdot 552^2 \approx 649432 \text{ cm}^2$$

$$O = 4 \cdot a = 4 \cdot 552 = 2208 \text{ cm}$$

$$P = \pi \cdot r^2 = \pi \cdot \left(\frac{450}{2}\right)^2 \approx 159045 \text{ cm}^2$$

$$O = 2 \cdot \pi \cdot r = 2 \cdot \pi \cdot \frac{450}{2} \approx 14137 \text{ cm}$$

OSMNA KATEDRALA



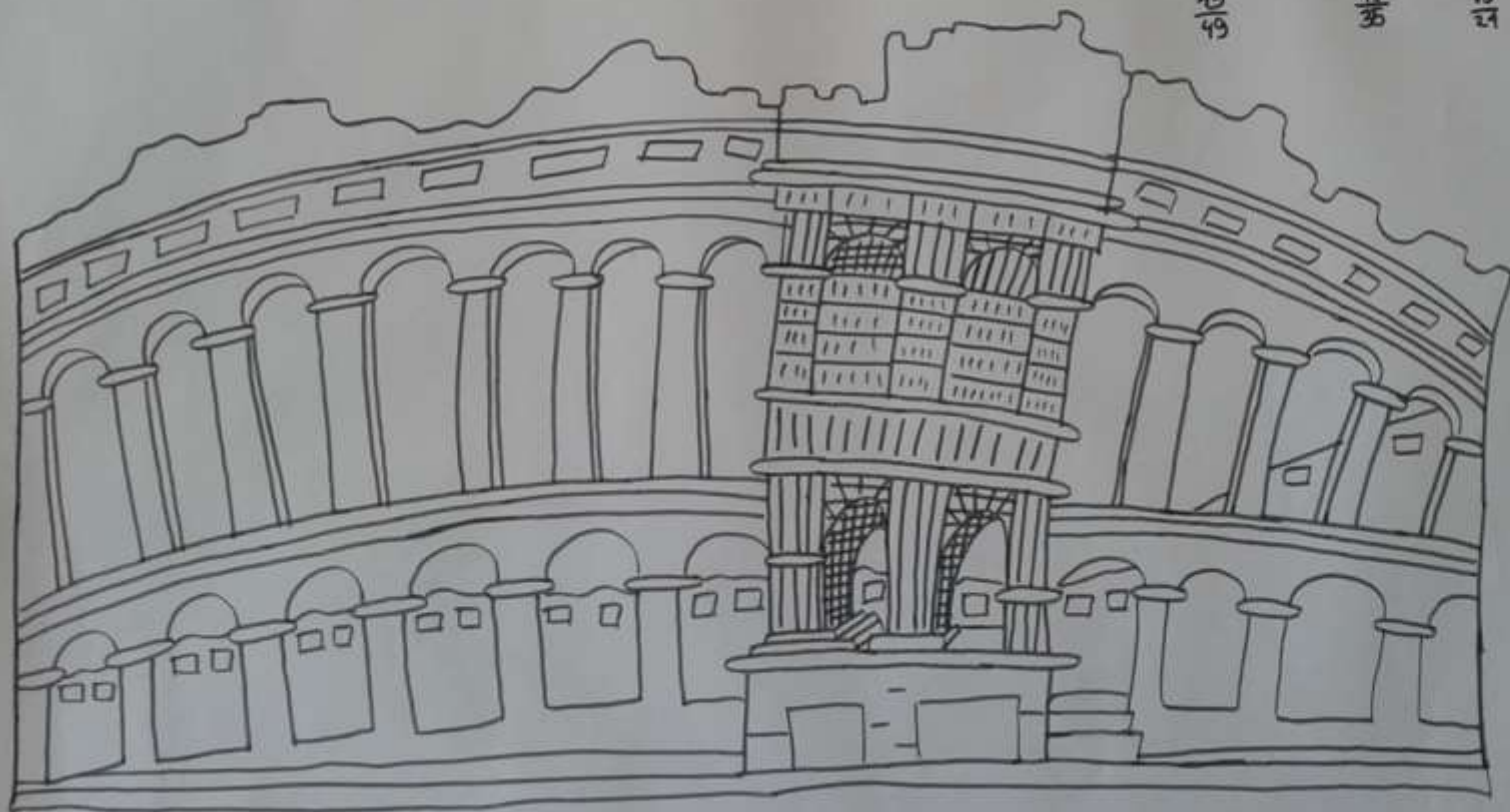
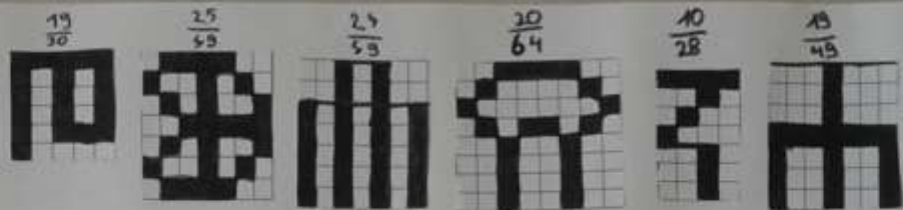
$$d_1 = 200 \text{ cm}$$

$$d_2 = 100 \text{ cm}$$

$$d_3 = 100 \text{ cm}$$

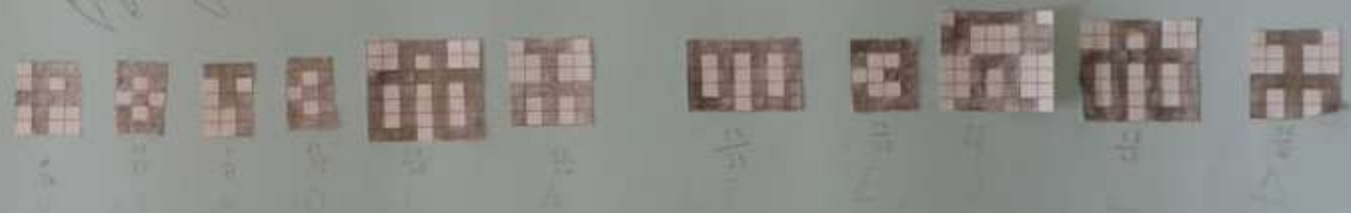
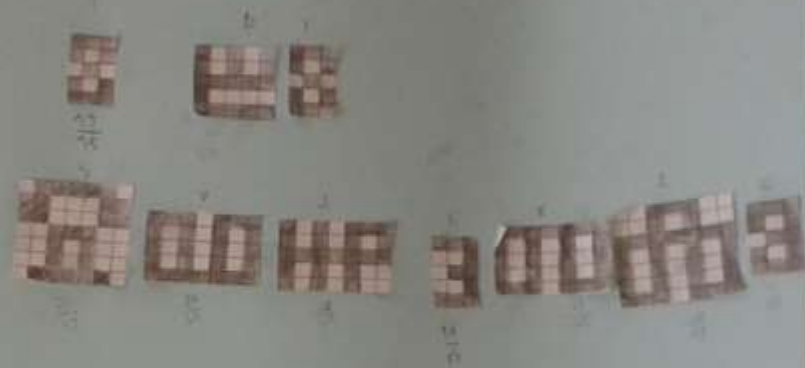
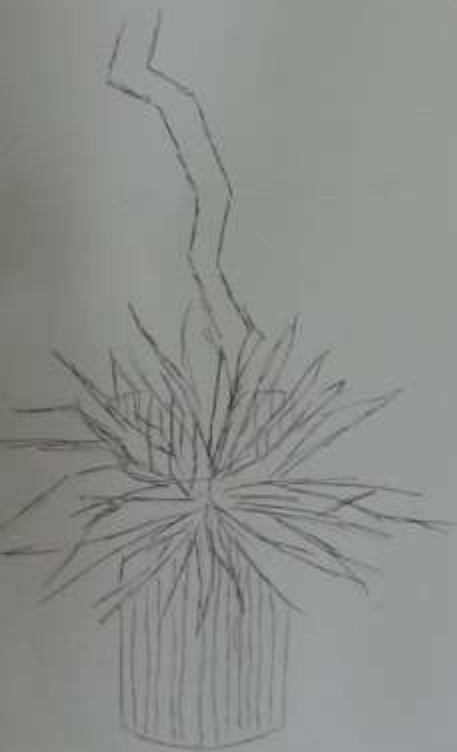
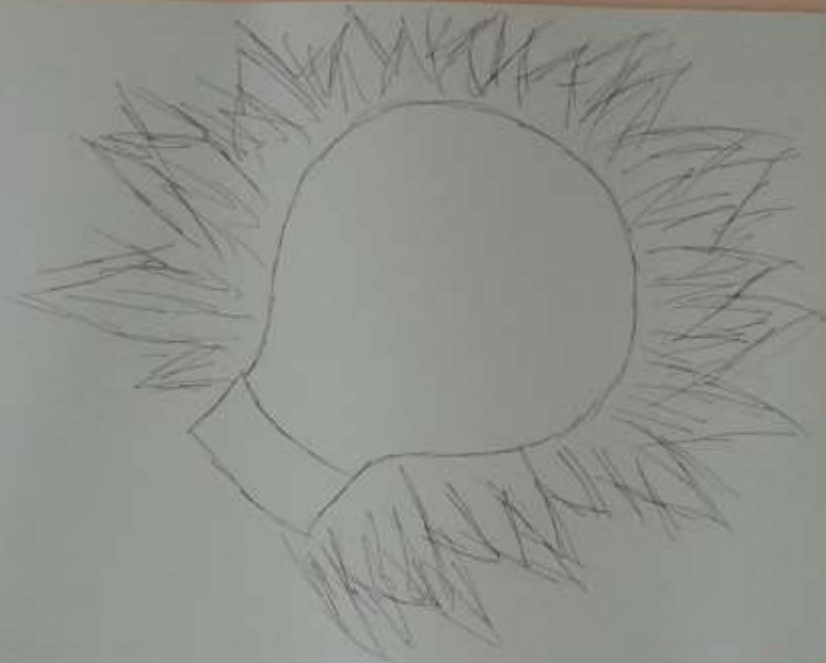
$$d_4 = 100 \text{ cm}$$





Maria Poslek
 Miroslav Družak
 Tina Čavalič
 Mgdalena Matković
 Eva Maršič







$$\frac{22}{30}$$



$$\frac{10}{15}$$



$$\frac{12}{35}$$



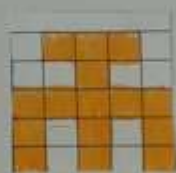
$$\frac{1}{15}$$



$$\frac{8}{20}$$



$$\frac{22}{36}$$



$$\frac{15}{25}$$



$$\frac{9}{15}$$



$$\frac{20}{25}$$



$$\frac{13}{25}$$



$$\frac{9}{10}$$



$$\frac{10}{25}$$



$$\frac{12}{35}$$



$$\frac{15}{25}$$



$$\frac{9}{15}$$



$$\frac{14}{20}$$



$$\frac{25}{36}$$



$$\frac{12}{15}$$



$$\frac{10}{20}$$



$$\frac{15}{35}$$



$$\frac{13}{15}$$



$$\frac{22}{35}$$



$$\frac{11}{15}$$



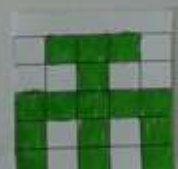
$$\frac{25}{36}$$



$$\frac{10}{15}$$



$$\frac{25}{35}$$



$$\frac{15}{25}$$



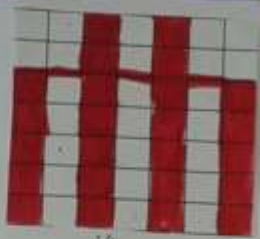
$$\frac{9}{15}$$



$\frac{21}{28}$



$\frac{17}{24}$



$\frac{24}{43}$



$\frac{35}{61}$



$\frac{19}{36}$

$\frac{17}{24}$



$\frac{15}{35}$



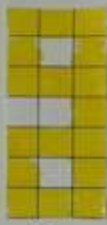
$\frac{34}{43}$



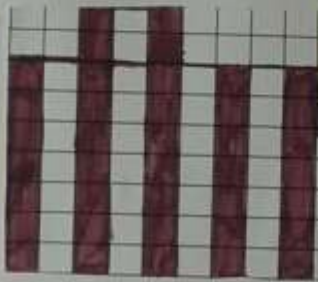
$\frac{12}{30}$



$\frac{15}{35}$



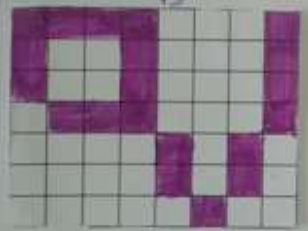
$\frac{17}{24}$



$\frac{41}{50}$



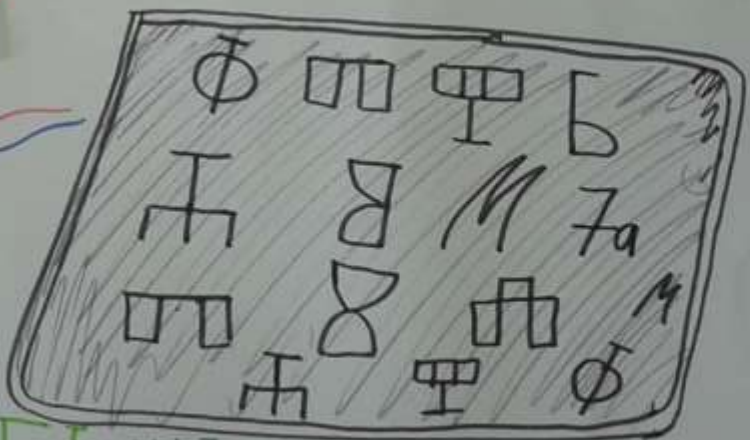
$\frac{35}{41}$



$\frac{36}{56}$



$\frac{27}{49}$



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