

Promenljive i vrste podataka

Promenljive

$x = 5$

$x = 3$

$x += 2$

$y = 4$

$x = x + y$

5
x

3
x

3+2
x

5
x

5
x

4
y

9
x

4
y

Tipovi podataka

Int - ceo broj
float/double - realan broj
char - slovo / karakter
string - vise slova
bool - true ili false (0 ili 1)

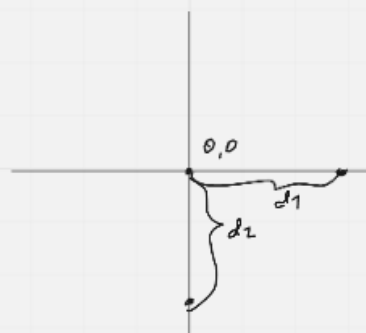
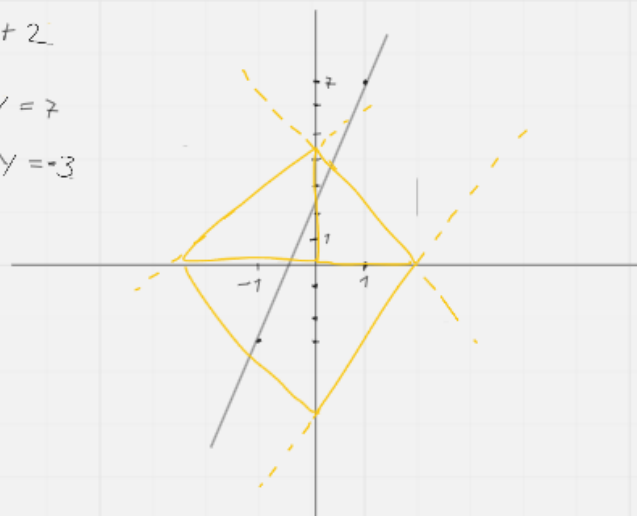
Funkcije

Console.ReadLine() - cita jednu liniju
Console.WriteLine("abc") - ispisuje abc
Convert.ToInt32(x) - konvertuje x u ceo broj
Int.Parse(x)
Convert.ToString()...
Math.Round(x,2) - zaokruzi na 2 decimale
Math.Sqrt(x) - koren
Math.Abs(x) - apsolutna vrednost
Math.Pow(x,y) - x^y

$$Y = 5X + 2$$

$$X = 1 \quad Y = 7$$

$$X = -1 \quad Y = -3$$

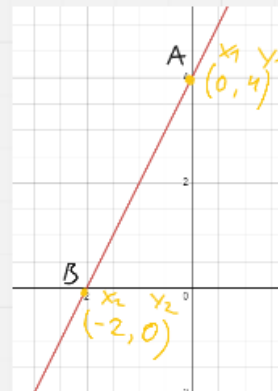
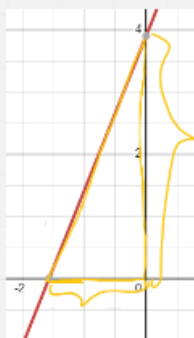


$$a = 2.5 \quad b = 3$$

$$d_1 = 3$$

$$d_2 = \left| -\frac{3}{2.5} \right| = 1.2$$

$$P = \frac{3 \cdot 1.2}{2} = 1.8$$



$$Y = 2X + 4$$

$$Y_1 = 2 \cdot 0 + 4 = 4$$

$$0 = 2X + 4$$

$$X = -2$$

U opstem slucaju

$$aX + b$$

$$A(0, Y_1)$$

$$B(X_2, 0)$$

$$Y_1 = a \cdot 0 + b$$

$$0 = a \cdot X_2 + b$$

$$a \cdot X_2 = -b$$

$$X_2 = -\frac{b}{a}$$

$$Y_1 = 4$$

$$X_2 = -\frac{4}{2} = -2$$

d_1 - udaljenost izmedju tacke A i tacke 0,0

d_2 - udaljenost izmedju tacke B i 0,0

$$d_2 = \sqrt{X_2^2 + Y_2^2}$$

$$Y_2 = 0$$

$$d_2 = \sqrt{X_2^2}$$

$$d_2 = |X_2|$$

$$d_2 = \left| -\frac{b}{a} \right|$$

$$A(0, 4) \quad (0, 0)$$

$$d_1 = \sqrt{(0-0)^2 + (4-0)^2}$$

$$d_1 = \sqrt{4} = 2$$

$$d_1 = \sqrt{(X_1-0)^2 + (Y_1-0)^2}$$

$$d_1 = \sqrt{X_1^2 + Y_1^2}$$

$$X_1 = 0$$

$$d_1 = \sqrt{Y_1^2} \neq Y_1$$

$$= |Y_1|$$

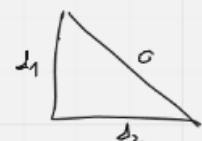
$$d_1 = |b|$$

$$\sqrt{(-5)^2} = 5$$

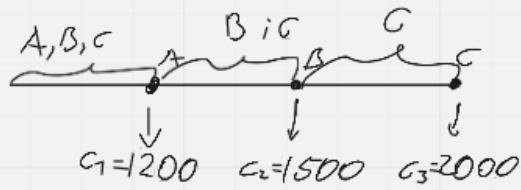
$$\text{Povrsina} = d_1 \cdot d_2 / 2$$

$$\text{Obim} = d_1 + d_2 + c$$

$$c = \sqrt{d_1^2 + d_2^2}$$



Zadatak Taksi



$$A = \frac{c_1}{3}$$

$$B = \frac{c_2 - A}{2}$$

$$C = c_3 - A - B$$

$$A = \frac{1200}{3} = 400$$

$$B \text{ i } C \text{ treba da podele } 1500 - 400 = \frac{1100}{2} = 550$$

$$C: 2000 - 400 - 550 = 1050$$

Zadatak razmeni cifre

1234523 1234325

$$713 = 7 \cdot 100 + 1 \cdot 10 + 3$$

$$7 \cdot 10 + 1 + 0.3$$

45713

Ostatak pri deljenju u cxx

$$C = x \% 10;$$

$$5:2 = 2 \cdot 2 + 1 \text{ ostatak}$$

$$45713:10 = 4571 \cdot 10 + 3$$

Znamo da dobijemo poslednju cifru. Kako da dobijemo cifru stotina?

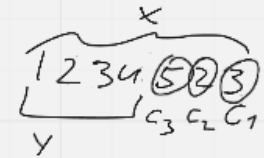
$$1234523 = 123452 \cdot 10 + 3$$

$$1234523 // 10 = 123452$$

Podelimo sa 100 celobrojno da odbacimo poslednje dve cifre

$$1234523 // 100 = 12345$$

$$12345 \% 10 = 5$$



$$C_1 = x \% 10 \rightarrow 3$$

$$C_2 = (x / 10) \% 10 \rightarrow 2$$

$$C_3 = (x / 100) \% 10 \rightarrow 5$$

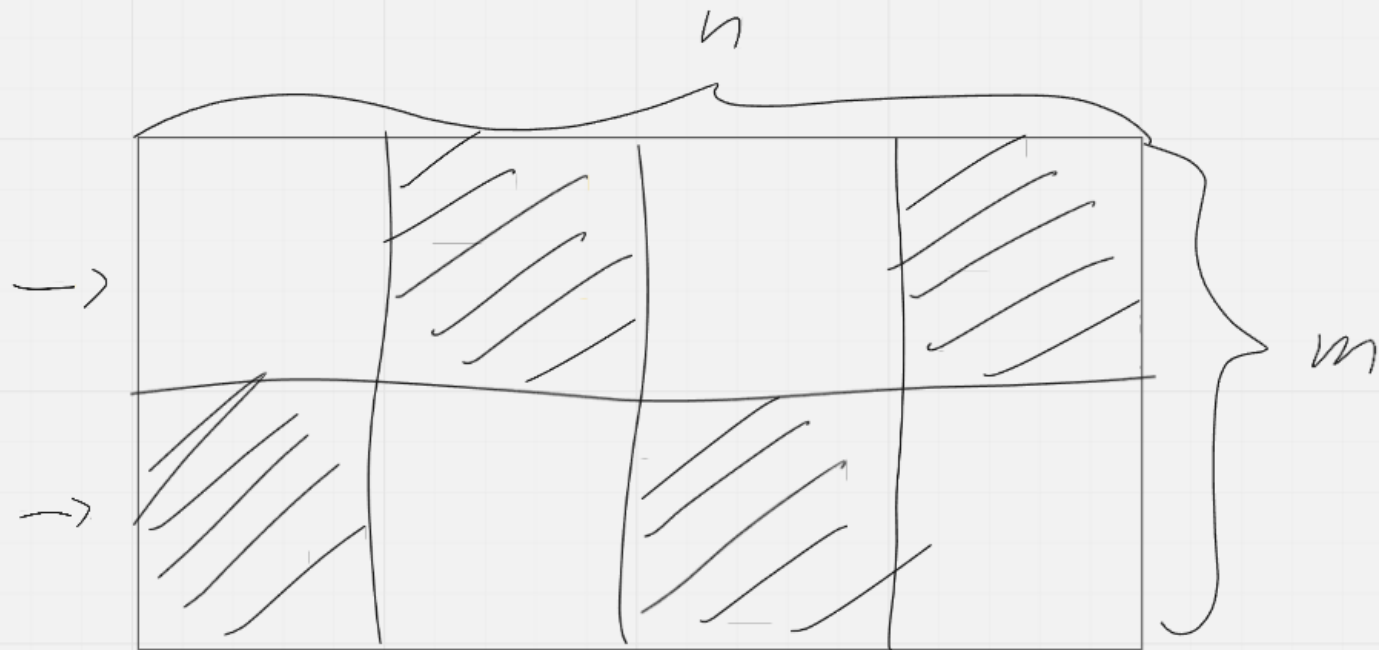
$$Y = x / 1000 \text{ (npr. 1234)}$$

$$Y = Y \cdot 10 + C_1 \quad 12343$$

$$Y = Y \cdot 10 + C_2 \quad 123432$$

$$Y = Y \cdot 10 + C_3 \quad 1234325$$

Zadatak šahovska tabla



Koliko crnih polja?

broj crnih = ...