

PARABOLE OKO NAS

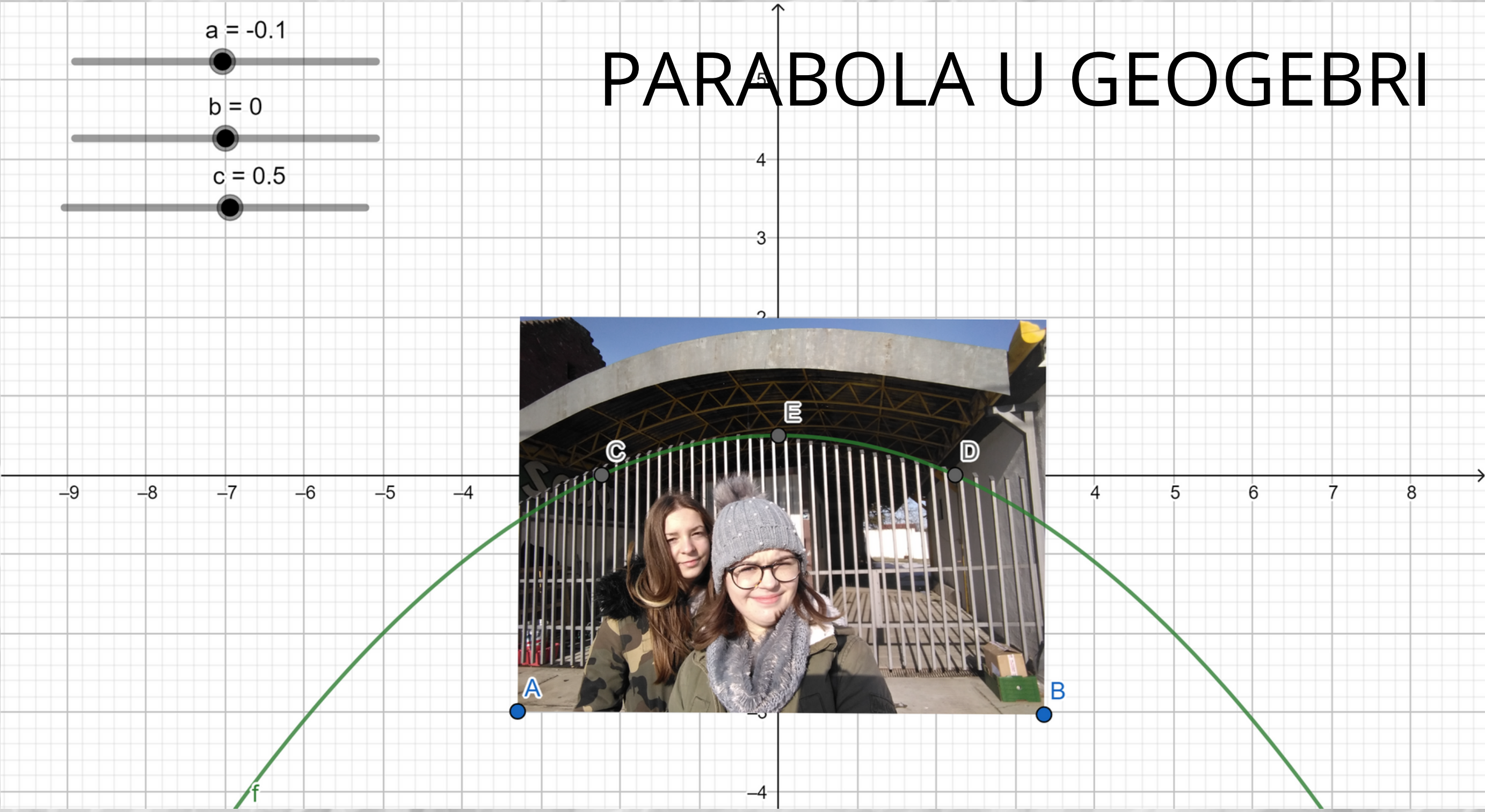
Napravile: Anđela i Teodora

PRIMERI PARABOLA U PRIRODI





PARABOLA U GEOGEBRI



	A = (-4, -4)
	B = (4, -4)
	a = -0.1
	-5 5
	b = 0
	-5 5
	c = 0.5
	-5 5
	$f(x) = ax^2 + bx + c$ $\rightarrow -0.1x^2 + 0x + 0.5$
	Nulhočka(f) $\rightarrow C = (-2.2360679774998, 0)$
	$\rightarrow D = (2.2360679774998, 0)$

NULTAČKE:

$$C = (-2.2360679774998, 0)$$

$$D = (2.2360679774998, 0)$$

	-5 5
	b = 0
	-5 5
	c = 0.5
	-5 5
	$f(x) = ax^2 + bx + c$ $\rightarrow -0.1x^2 + 0x + 0.5$
	Nulhočka(f) $\rightarrow C = (-2.2360679774998, 0)$
	$\rightarrow D = (2.2360679774998, 0)$
	E = Ekstrem(f) $\rightarrow (0, 0.5)$
	Unos...

$$f(x) = ax^2 + bx + c$$

$$f(x) = -0.1x^2 + 0x + 0.5$$

$$-b/2a = -0/2 * (-0,1) = -0/-0.2 = 0$$

$$4ac - b^2/4a = 4 * (-0,1) * 0.5 - 0^2 / 4 * (-0.1) = -0.2 / -0.4 = 0.5$$



$$T(0, 0.5)$$

Vodeći koeficijent a je negativan, parabola je okrenuta prema dole

SECIŠTE S ORDINATOM - $(0, 0.5)$

EKSTREM (f) - $(0, 0.5)$ - maksimum zato što je $a < 0$

INTERVALI RASTA I PADA

x	$-\infty$	0	$+\infty$
$f(x)$		0.5	

interval pada

$< -\infty, 0 >$

interval rasta

$< 0, +\infty >$

DISKRIMINANTA

$$D = b^2 - 4ac$$

$$a = -0.1$$

$$b = 0$$

$$c = 0.5$$

$$D = 0^2 - 4 * (-0.1) * 0.5$$

$$D = 0 + 0.2$$

$$D = 0.2$$

$D > 0$ - rešenja realna i različita

NEJEDNAČINE

$$f(x) = -0.1x^2 + 0x + 0.5 > 0$$

$$\langle -2.24, 2.24 \rangle$$

$$f(x) = -0.1x^2 + 0x + 0.5 < 0$$

$$\langle -\infty, -2.24 \rangle \cup \langle 2.24, +\infty \rangle$$

$$f(x) = -0.1x^2 + 0x + 0.5 \geq 0$$

$$\square -2.24 \sqsupset$$

$$f(x) = -0.1x^2 + 0x + 0.5 \leq 0$$

$$\langle -\infty, -2.24 \sqsupset \cup \square 2.24, +\infty \rangle$$