

# Sračunati direkcione uglove i dužine iz koordinata tačaka

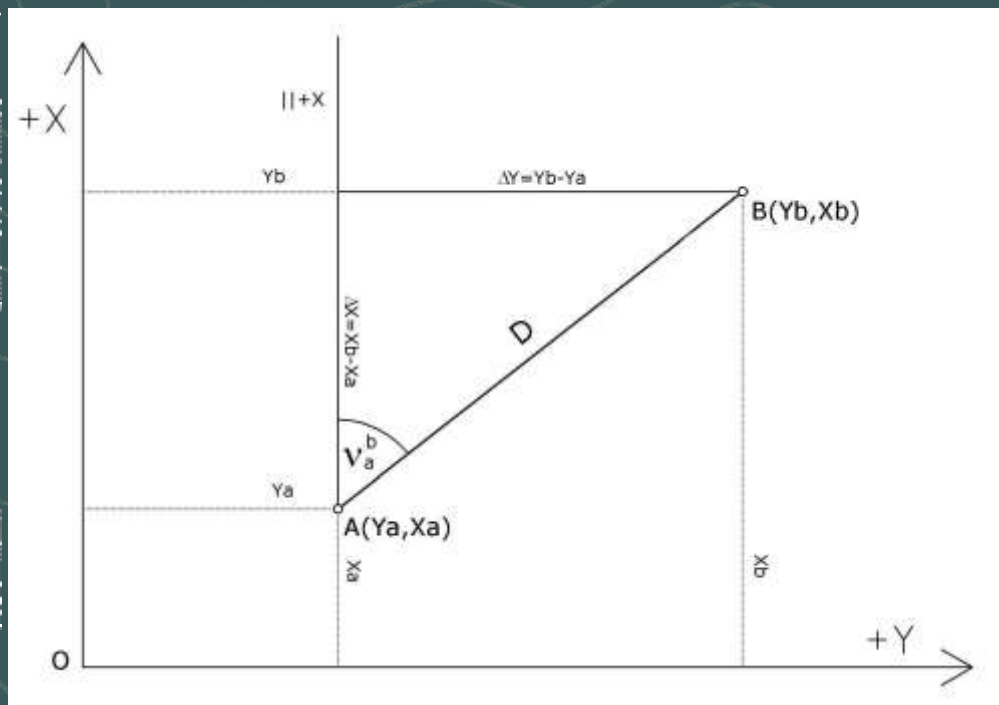
$v_{29}^{30}$

A -> 29 , B -> 30

$v_{47}^{53}$

A -> 47 , B -> 53

## Računanje direkcionog ugla i dužine iz koordinata tačaka



$$\Delta Y = Y_b - Y_a$$

$$\Delta X = X_b - X_a$$

$$D_{a-b} = \sqrt{\Delta Y^2 + \Delta X^2}$$

prema tabeli

$$\operatorname{tg} \alpha = \frac{\Delta Y}{\Delta X} \quad \text{ili} \quad \operatorname{tg} \alpha = \frac{\Delta X}{\Delta Y}$$

$$v_a^b = \alpha + ?$$

kvadrant	$\Delta Y$	$\Delta X$	$tg\alpha$	$v_a^b$
I	+	+	$\frac{\Delta Y}{\Delta X}$	$\alpha$
II	+	-	$\left  \frac{\Delta X}{\Delta Y} \right $	$\alpha + 90^\circ$
III	-	-	$\frac{\Delta Y}{\Delta X}$	$\alpha + 180^\circ$
IV	-	+	$\left  \frac{\Delta X}{\Delta Y} \right $	$\alpha + 270^\circ$

# Računanje arctg $\alpha$ i $\nu$ pomoću digitrona

Casio:

7.69190 **shift** **tan** 82.5927014 **shift** **° ' "** 82°35°34  
82°35°34° + 90°0°0° = 172°35°34

Obični:

7.69190 **2nf** **tan** 82.5927014 **2nf** **DEG** 82.3534  
82.3534 **DEG** 82.5927014 + 90.0000 **DEG** 90  
= 172.5927014 **2nf** **DEG** 172.3534

Kontrola računanja direkcionog ugla:

$$\Delta Y' = \Delta X + \Delta Y$$

$$\Delta X' = \Delta X - \Delta Y$$

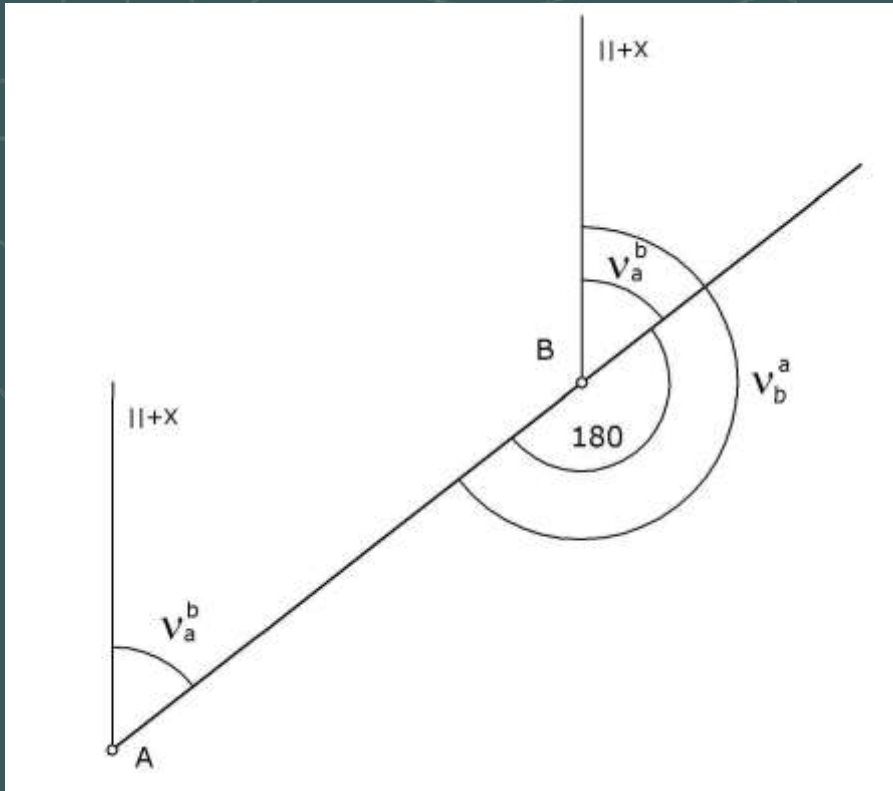
prema tabeli

$$\operatorname{tg} v' = \frac{\Delta Y'}{\Delta X'} \quad \text{ili}$$

$$\operatorname{tg} v' = \frac{\Delta X'}{\Delta Y'}$$

Kontrola računanja dužine:

$$D_{a-b} = \frac{\Delta Y}{\sin v_a^b} = \frac{\Delta X}{\cos v_a^b}$$



$$v_b^a = v_a^b \pm 180^\circ$$

$$v_b^a = v_a^b + 180^\circ$$

Kada je  $v_a^b < 180^\circ$

$$v_b^a = v_a^b - 180^\circ$$

Kada je  $v_a^b > 180^\circ$