

PRATIM + ŠKRABAM = PAMTIM

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Borković Tea, Čapan Antonija  
OŠ Grabrik, Karlovac



“Škrabanje = crtež nastao u odsustvu koncentracije”

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- prikriveno promišljanje – stvaramo spontane oznake uz koje lakše pamtimo
- glava pamti dok ruka piše

## VIZUALNI JEZIK

- ✓ podupire i aktivira neurološke procese
- ✓ olakšava razumijevanje
- ✓ potpomaže dugotrajno pamćenje



# Tko je sve volio škrabati?

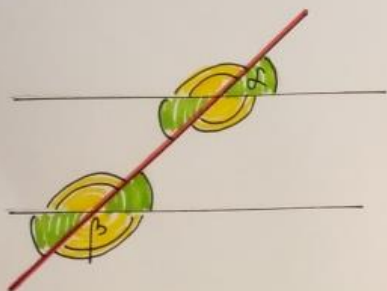
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- Thomas Edison
- Marie Curie
- Leonardo da Vinci
- Steve Jobs
- Bill Gates
- Nikola Tesla



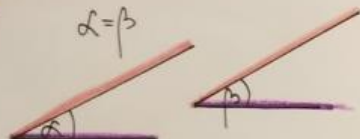
# TROKUT

KUTUZI UZ PRESJEČNICU



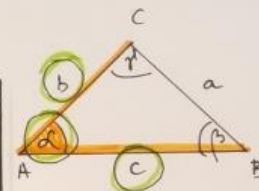
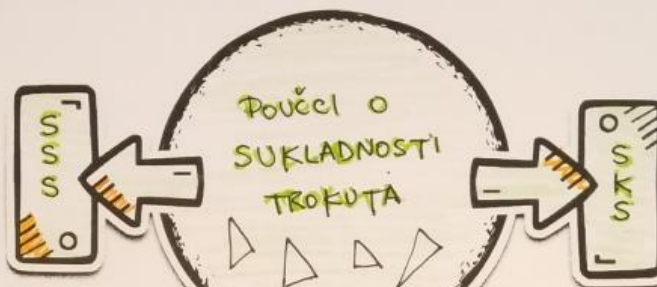
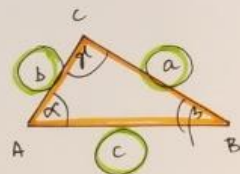
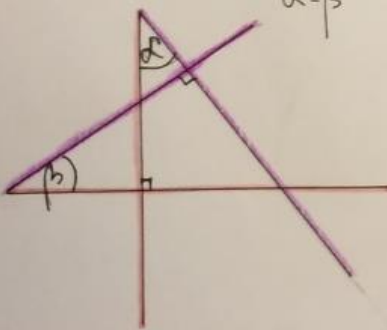
KUTUZI S USPREDNIM KRACIMA

$$\alpha = \beta$$



KUTUZI S OKOMITIM KRACIMA

$$\alpha = \beta$$



IZRADA KONSTRUKCIJE

NACRTAJ SKICU  
PAŽLJIVO!

1

ZAOKRUŽITI POZNATO  
+ PREPOZNATI  
POUČAK

2

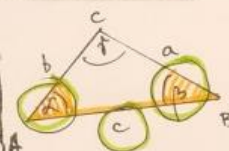
IZRADI  
PLAN!

3

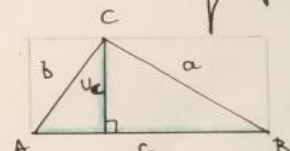
PAŽLJIVO PREMA  
PLANU NAPRAVI  
KONSTRUKCIJU

4

KSK



POVRŠINA  
TROKUTA



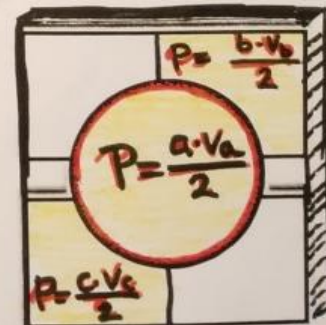
$$P_{\text{POVRŠINA}} = \frac{\text{STRANICA} \cdot \text{VISINA}}{2}$$

POJMOVI

✓ ZBROJ VELIČINA  
UNUTARNJIH KUTOVA  
 $\alpha + \beta + \gamma = 180^\circ$

✓ ZBROJ VELIČINA  
VANJSKIH KUTOVA  
 $\alpha' + \beta' + \gamma' = 360^\circ$

$$\sigma = a + b + c$$





# Istraživanja

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- Škrabanje koristi idealnu dozu energije da nam misli „ne bježe” ali ne dovoljno da bismo ga smatrali ometanjem
- laptop vs. bilježnica



# Istraživanja

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## BOJE

- ✓ učinkovito potpomažu učenje stvarajući **dugotrajnije** veze u pamćenju
- ✓ opuštaju
- ✓ poboljšavaju prisjećanje



# Put do znanja je popločen „poželjnim preprekama”

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- potiču pažnju i koncentraciju
- olakšavaju pamćenje



Učenicima se nude posebno pripremljeni listići na kojima će:

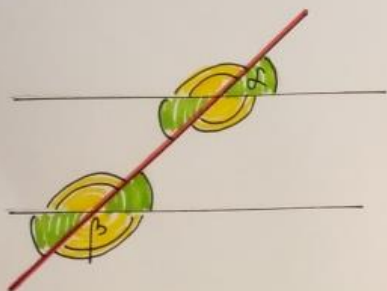
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- dobiti prigodno kreirane zadatke
- vođeno isticati važne dijelove
- ciljano osmisliti vizualne podsjetnike



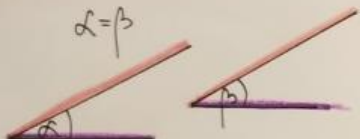
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KUTUZI UZ PRESJEČNICU



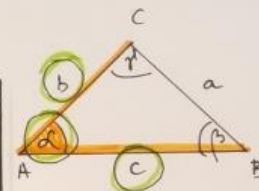
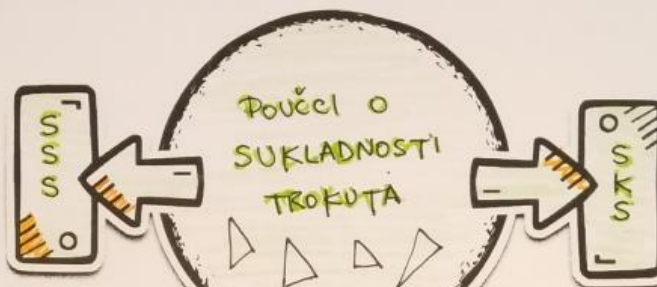
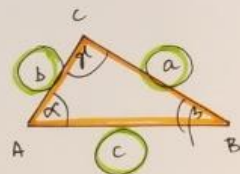
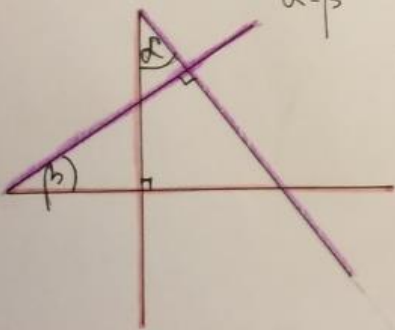
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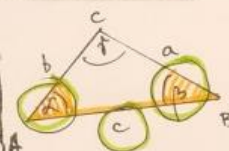
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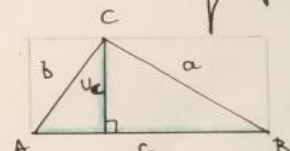
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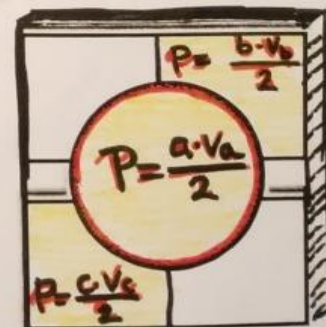
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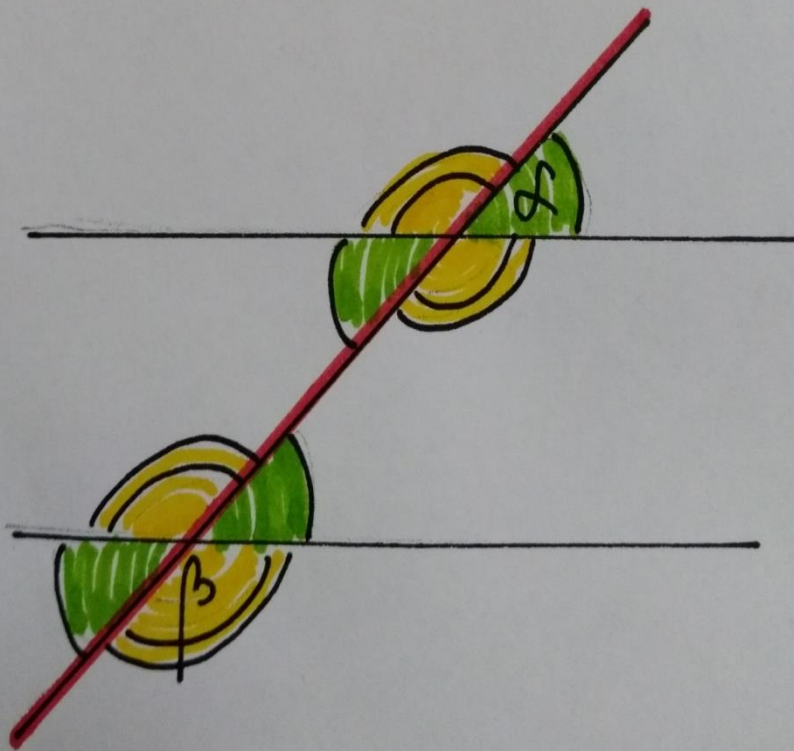
$$\sigma = a + b + c$$





# Na što paziti pri izradi?

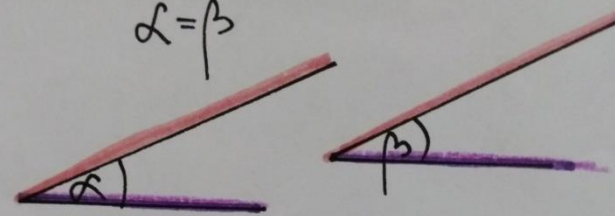
KUTOVI UZ PRESJEČNICU



KUTOVI S **USPOREDNIM**  
KRACIMA

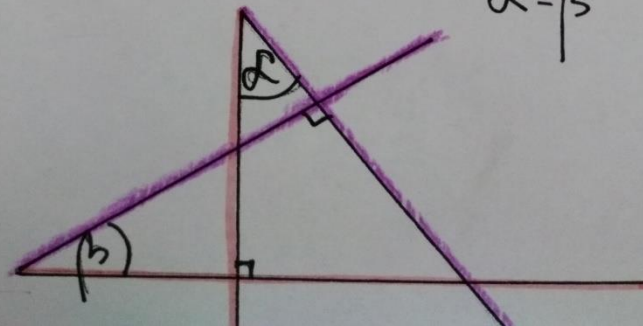


$$\alpha = \beta$$



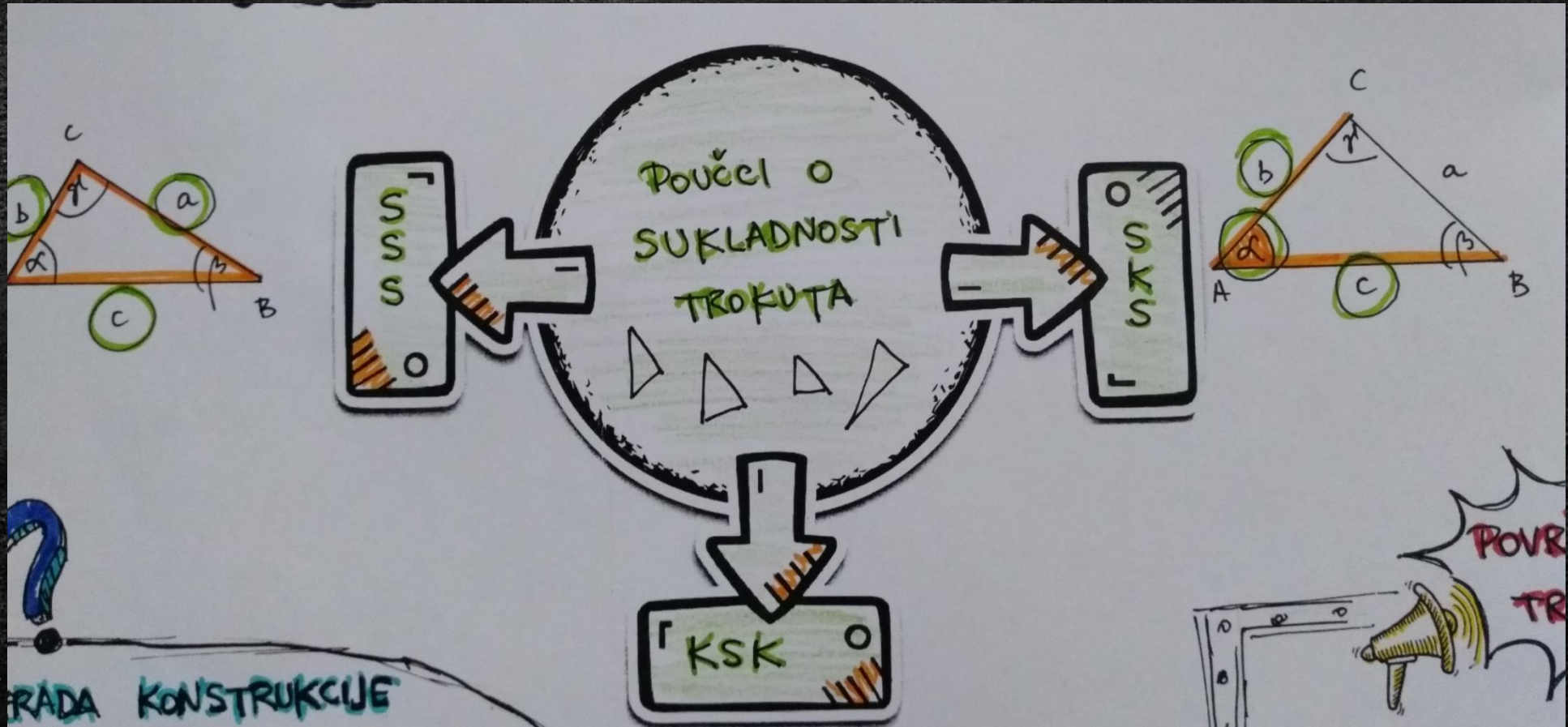
KUTOVI S **OKOMITIM**  
KRACIMA

$$\alpha = \beta$$



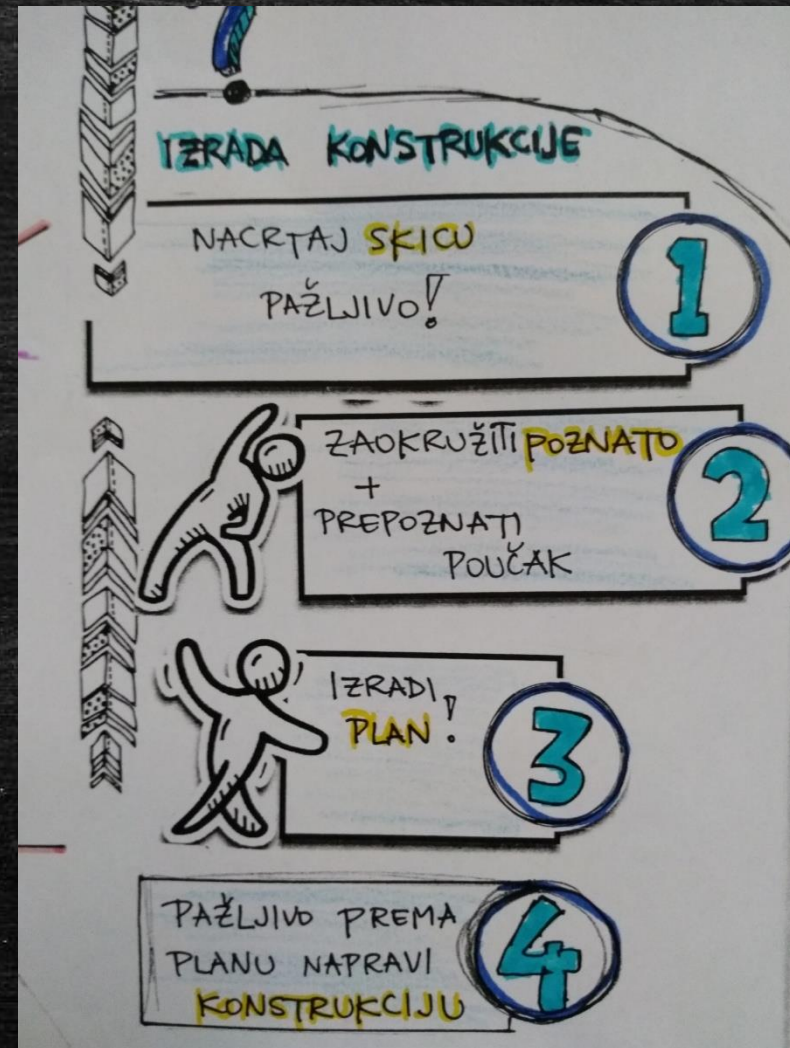
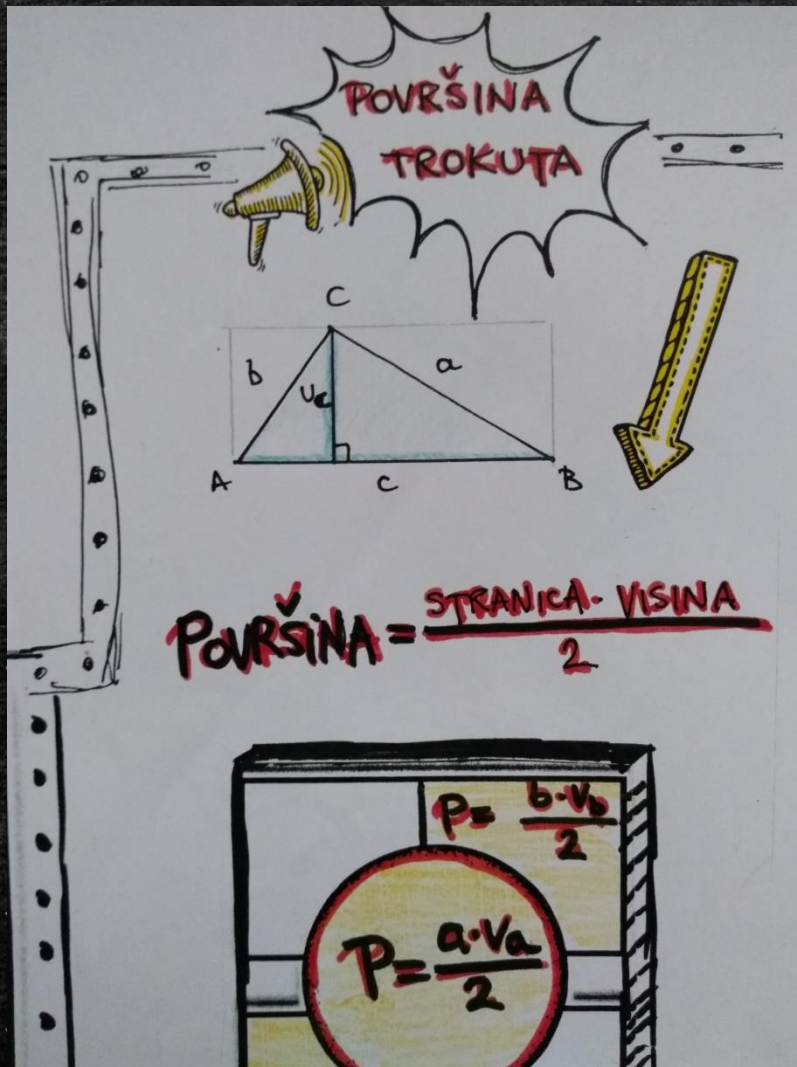


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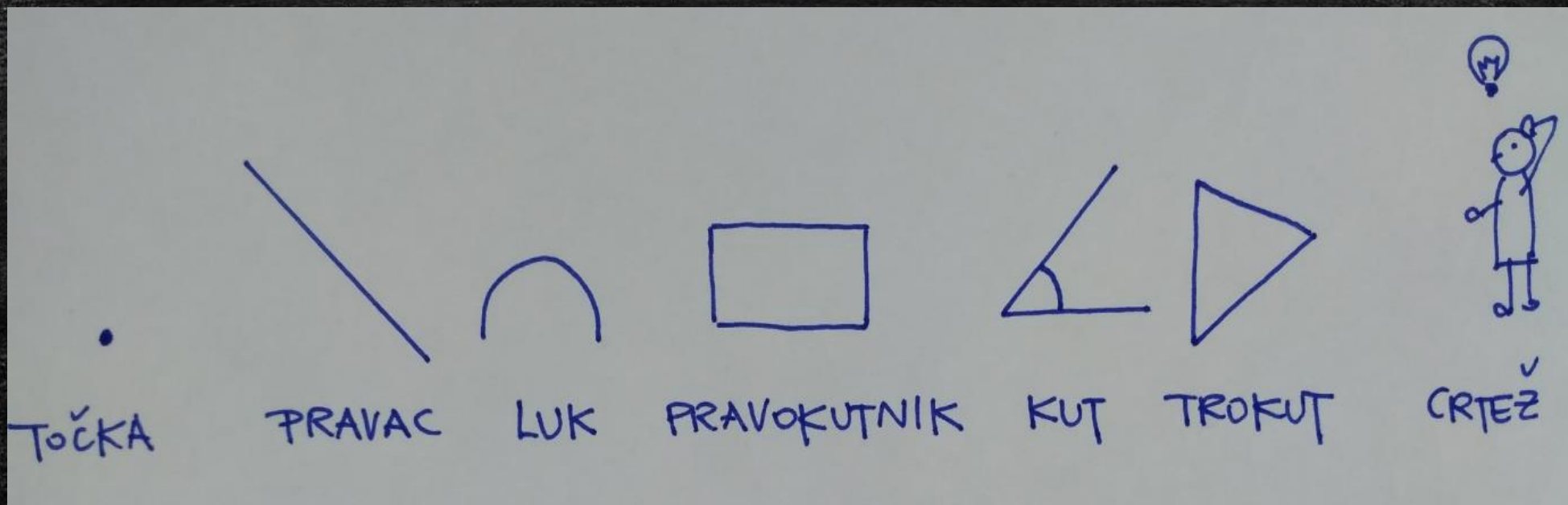
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# Nismo mi svi umjetnici!

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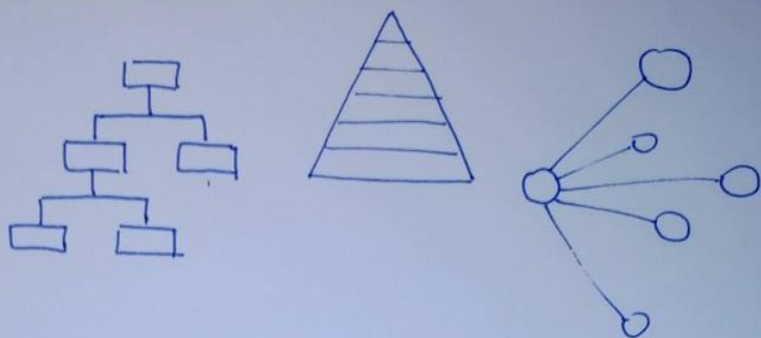
## Zašto i kada smo prestali crtati?



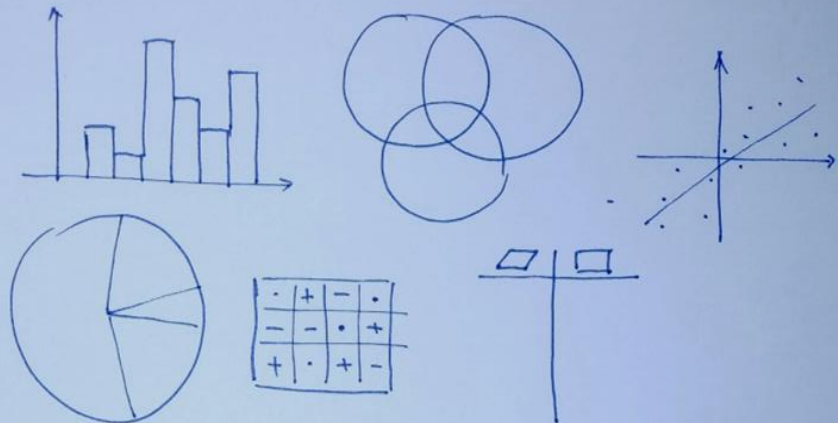


# Nismo mi svi umjetnici!

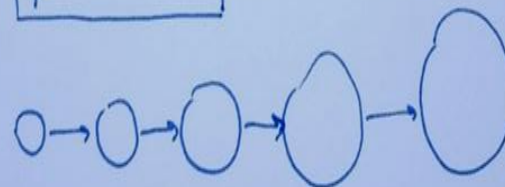
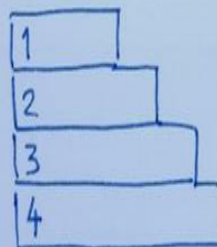
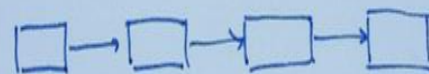
SUSTAVI



USPOREDBE

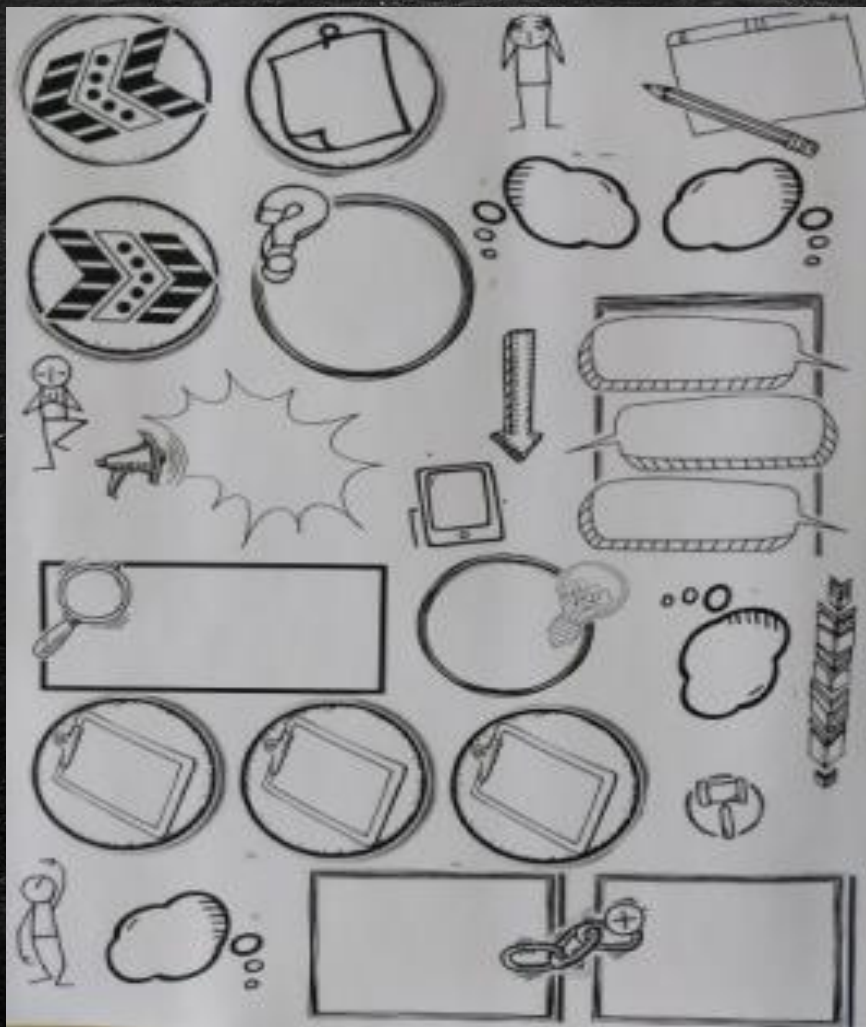


PROCESI



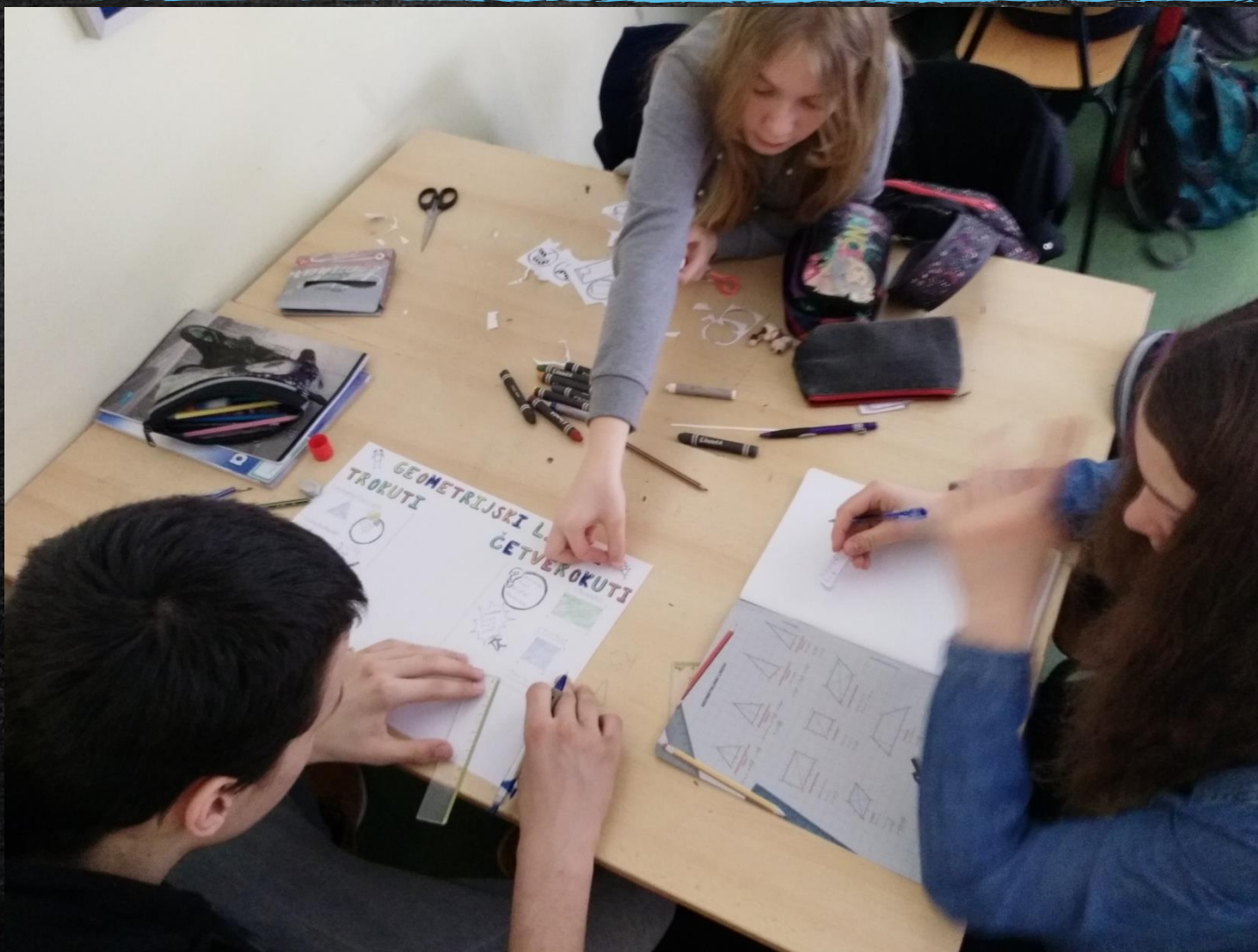


Nismo mi svi umjetnici!





# Grupni rad





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Hvala na pažnji!