

INFORMATIKA

Rezultati državne mature 2010.



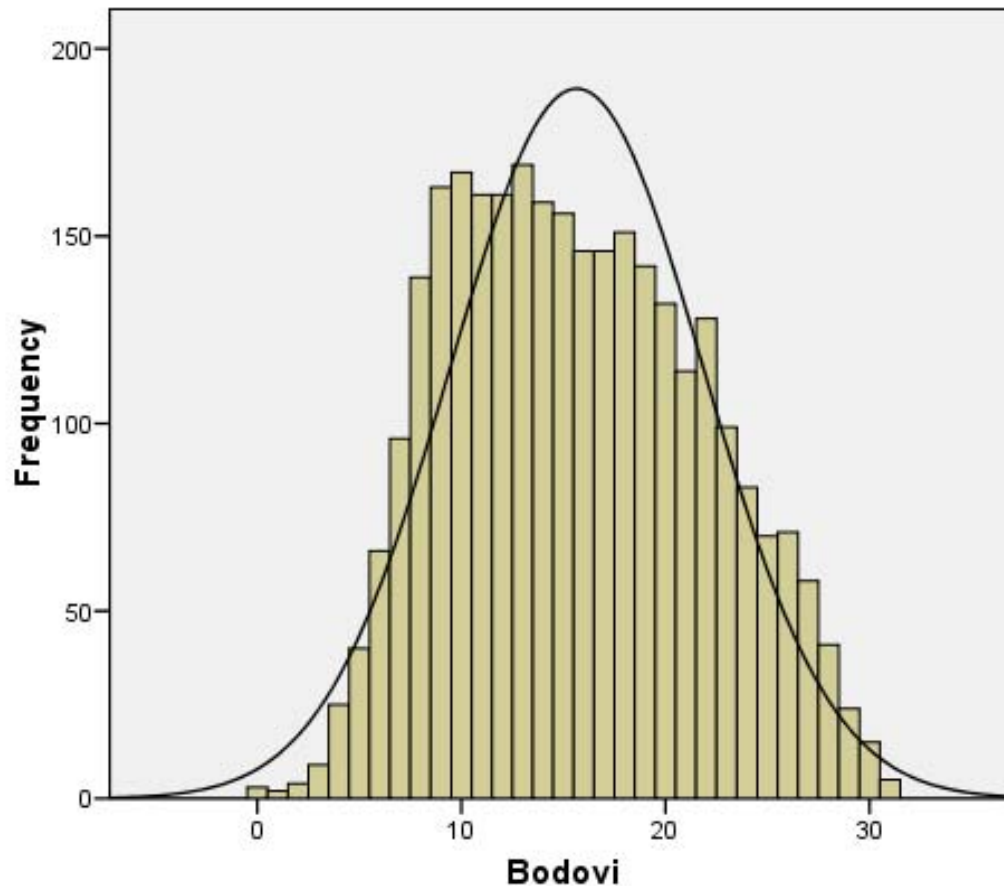
NACIONALNI CENTAR ZA VANJSKO
VREDNOVANJE OBRAZOVANJA

Deskriptivna statistika ukupnog rezultata

PARAMETAR		VRIJEDNOST
N		2945
k		32
M		15,7
St. pogreška mjerenja		2,32
Medijan		15
Mod		13
St. devijacija		6,21
Raspon		31
Minimum		0
Maksimum		31
Percentili	25	11
	50	15
	75	20
Cronbachov α		0,86

Deskriptivna statistika ukupnog rezultata

Histogram



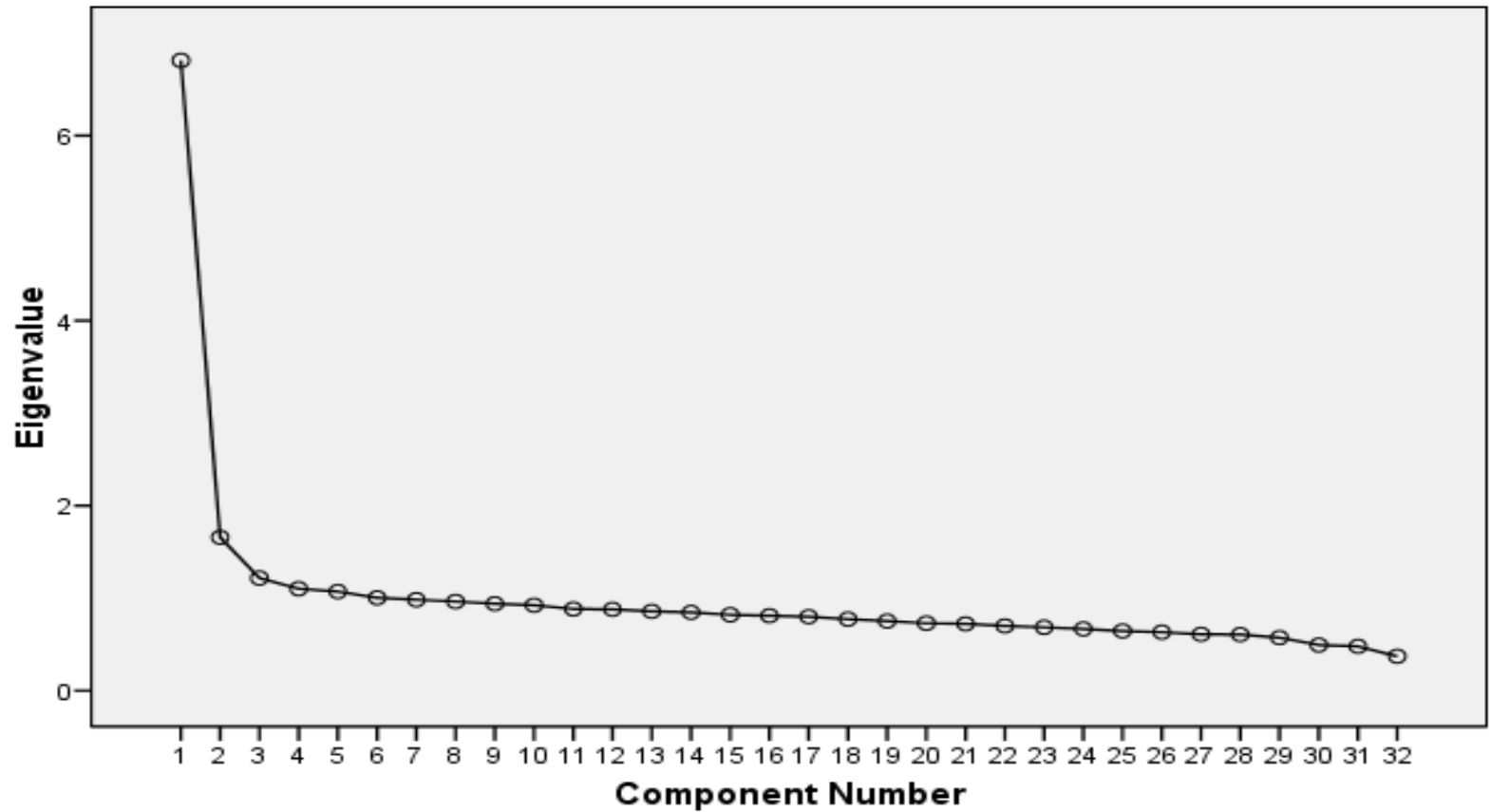
Mean =15,65
Std. Dev. =6,205
N =2.945

Pragovi ocjena i postotak učenika koji su dobili pojedinu ocjenu

	1	2	3	4	5
Prag	-	7	13	19	25
%	3,29	28,08	31,21	25,87	11,54



Scree Plot



1. faktor: 21 %

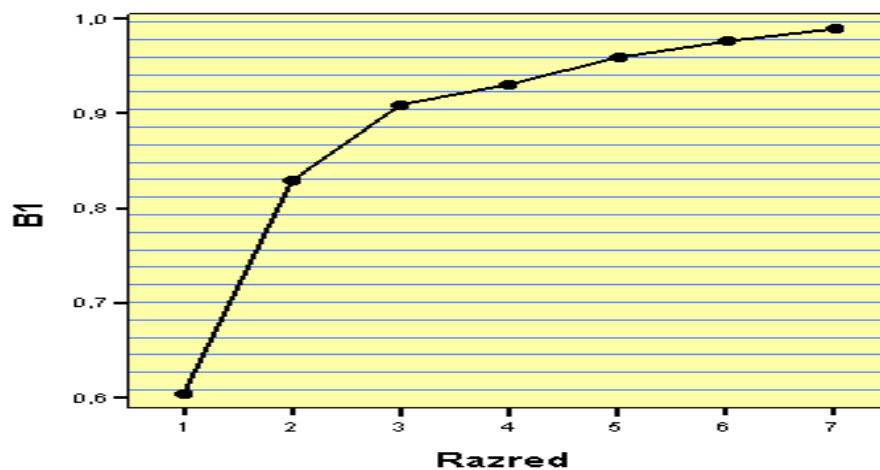
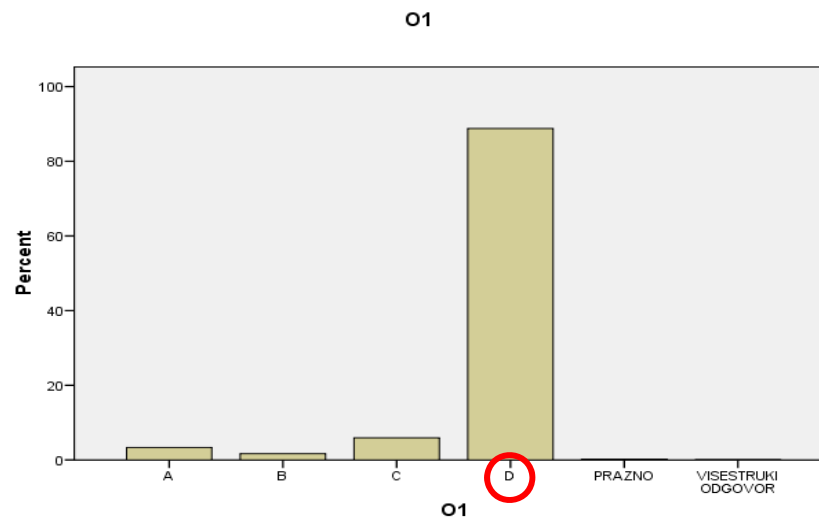


Težina zadatka	Redni broj zadatka
Vrlo težak (0 – 0,2)	26, 29, 30
Težak (0,21 – 0,4)	2, 3, 5, 6, 7, 10, 15, 19, 24
Srednje težak (0,41 – 0,6)	11, 12, 13, 17, 23, 25, 27, 28, 31, 32
Lagan (0,61 – 0,80)	4, 9, 14, 18, 20, 21
Vrlo lagan (0,81 – 1)	1, 8, 16, 22

I. Zadatci višestrukoga izbora

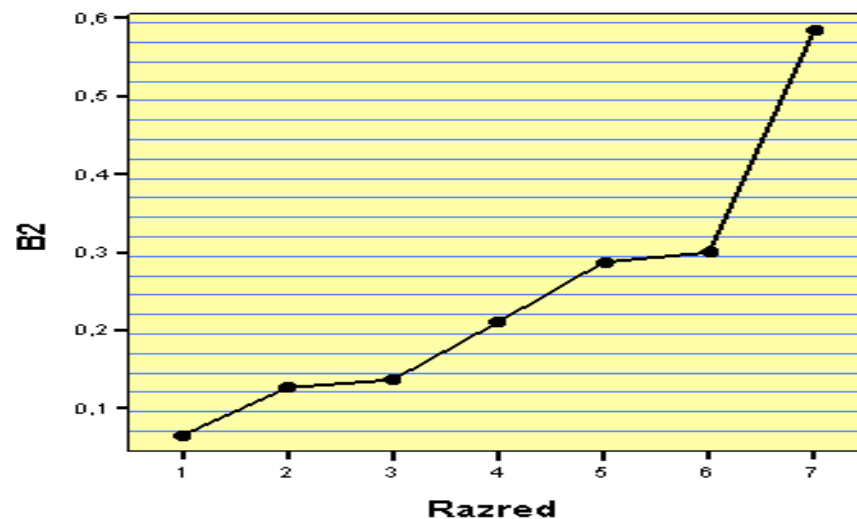
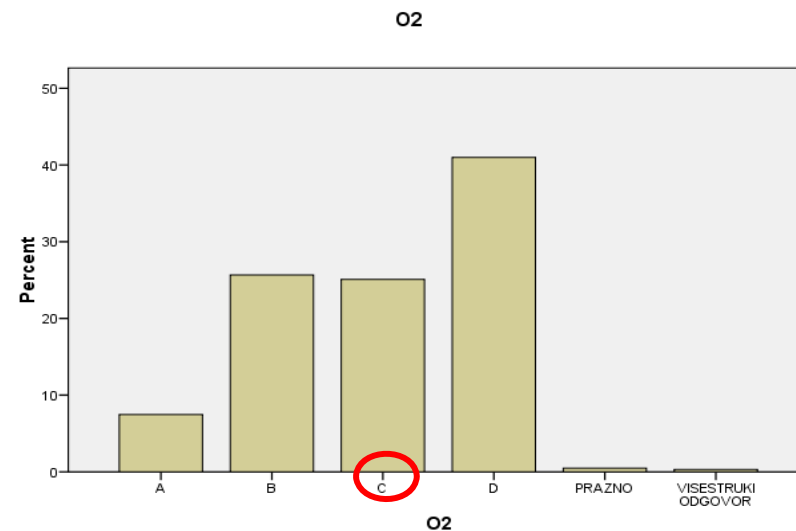
1. Koja od navedenih datoteka može imati nastavak *.wav*?

M	0,89
M (O)	0,70
ID	0,29



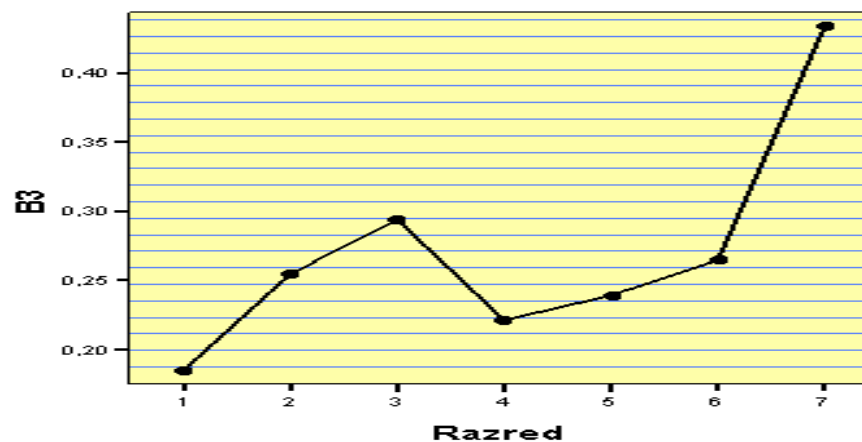
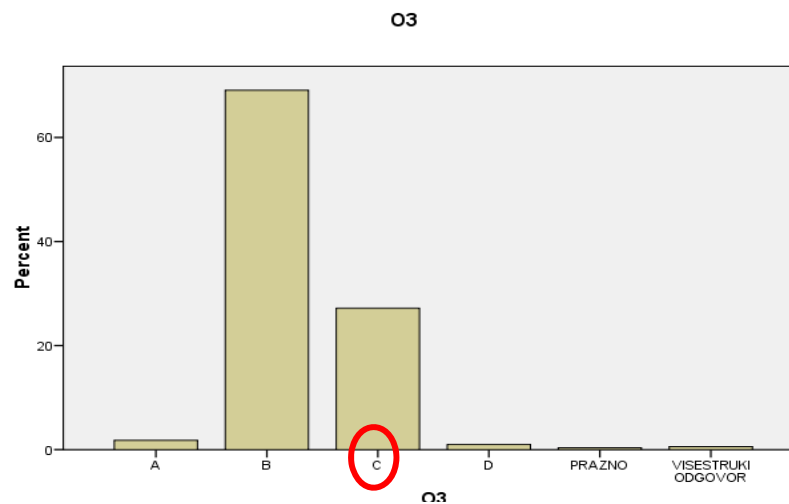
2. Što je od navedenoga ispravno napisana IP adresa?

M	0,25
M (O)	0,60
ID	0,31



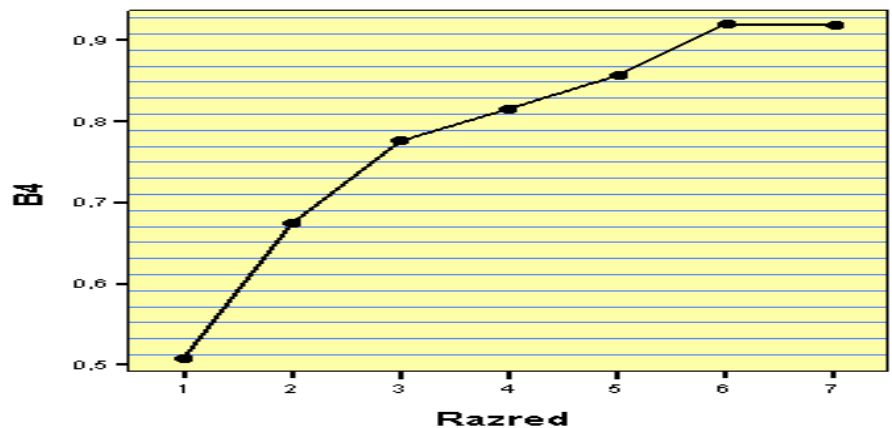
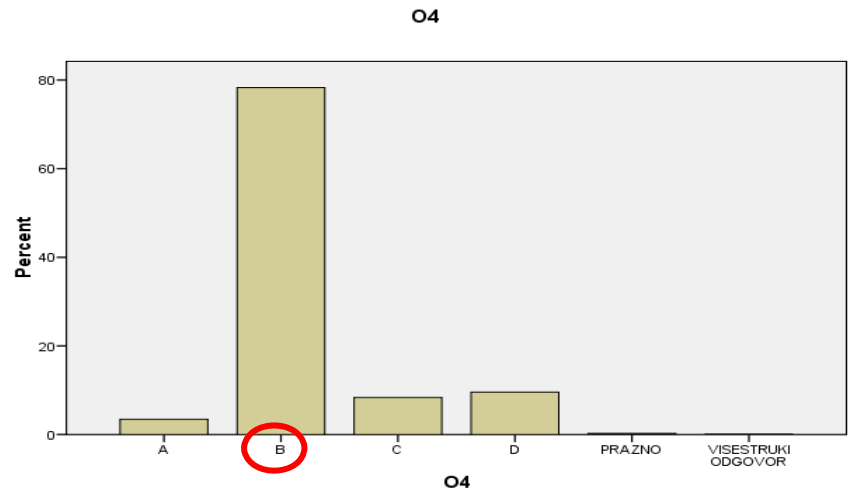
3. Što od navedenoga može biti adresa elektroničke pošte?

M	0,27
M (O)	0,40
ID	0,07



4. Ako želimo u programu za obradbu teksta napisati x^2 , prvo ćemo napisati $x2$, označiti 2 te u izborniku *Font* odabrati:

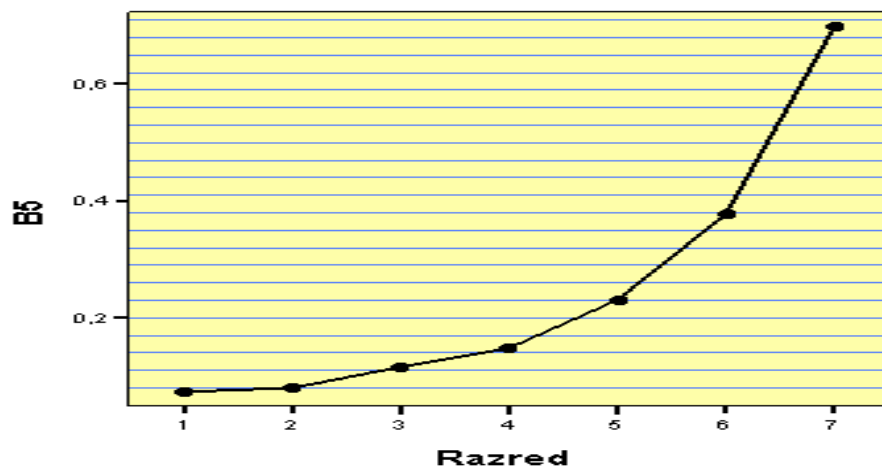
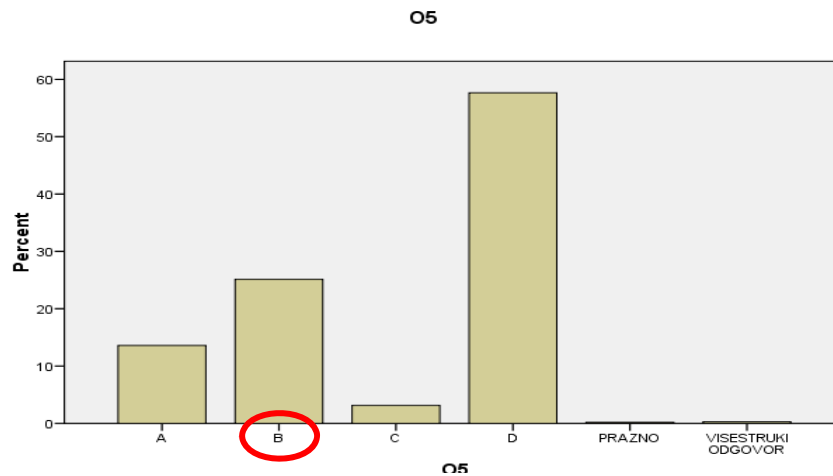
M	0,78
M (O)	0,70
ID	0,25



5. Kako izgleda matematički izraz koji u pseudojeziku ima oblik

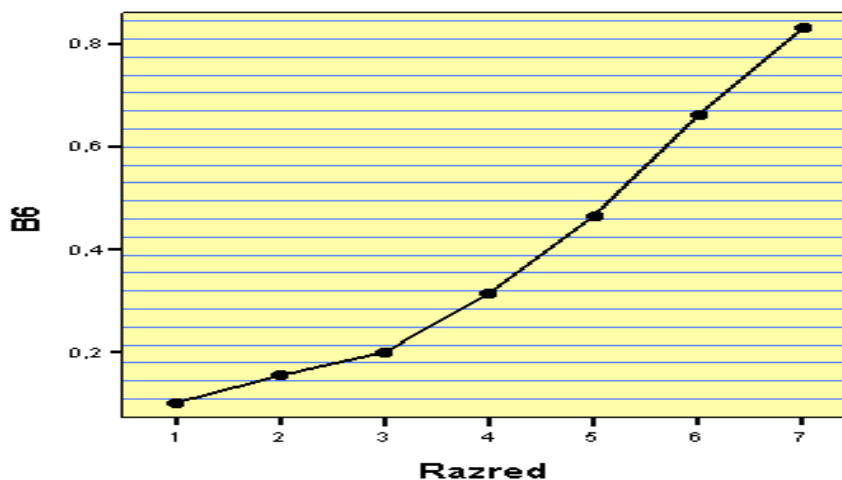
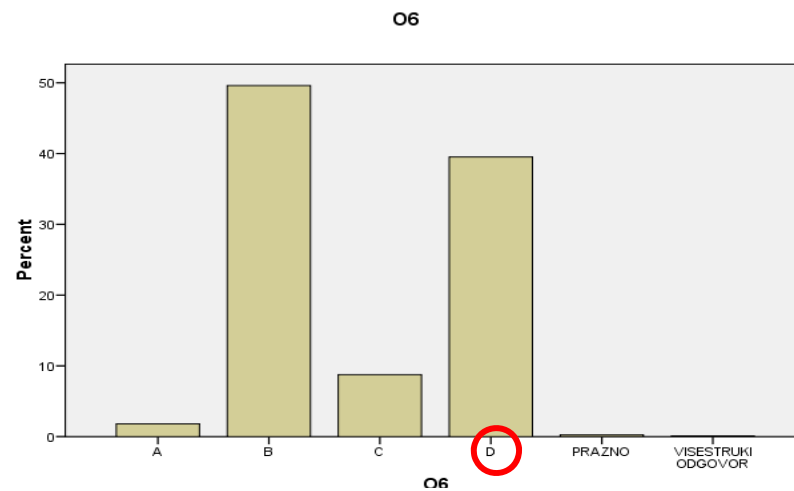
$$x := Sqr (Sqrt (a) - Sqrt (b)) / a * b ; ?$$

M	0,25
M (O)	0,50
ID	0,41



6. U programu za proračunske tablice stvoren je prikazani dio tablice. Koja će vrijednost pisati u ćeliji B3 ako u nju kopiramo formulu iz ćelije A3?

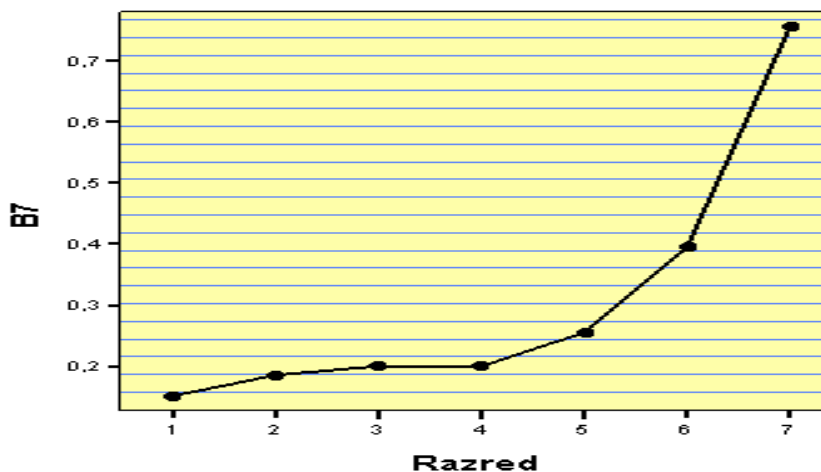
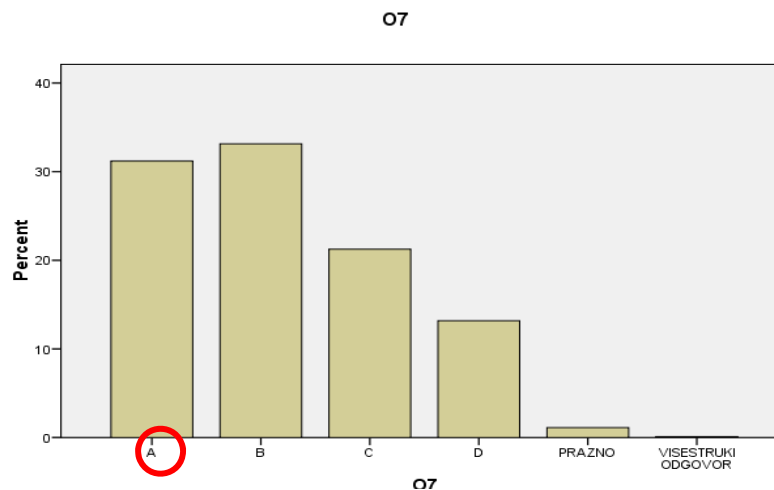
M	0,40
M (O)	0,60
ID	0,46



7. U programu za proračunske tablice stvoren je prikazani dio tablice.

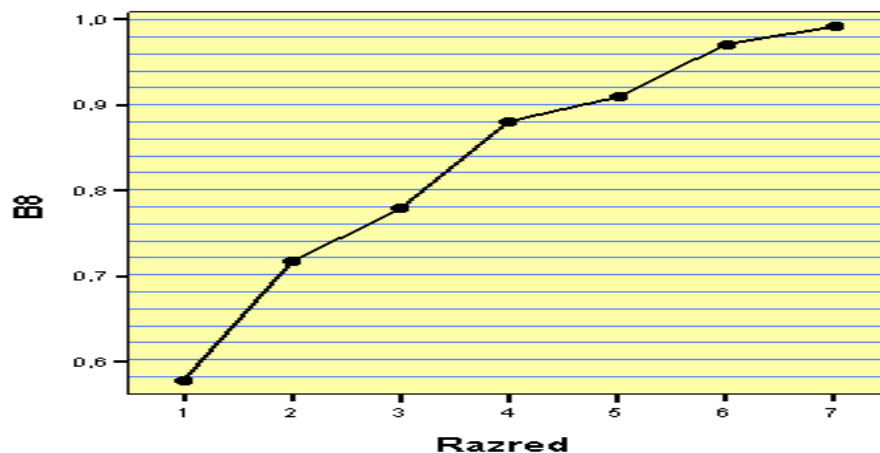
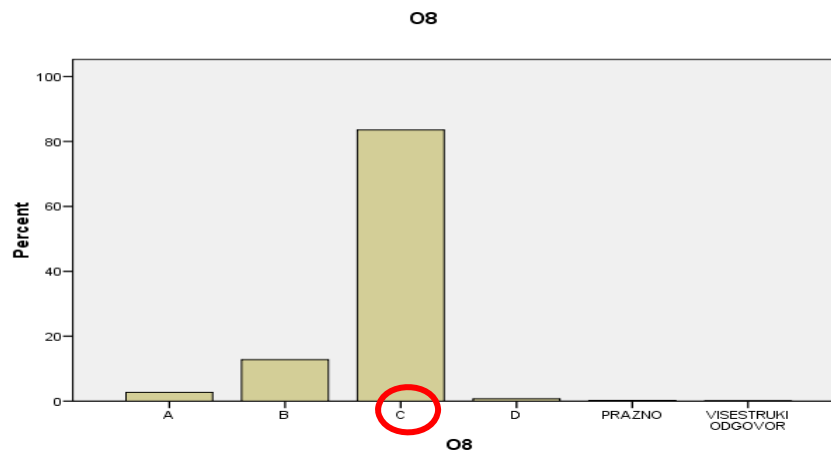
Koja će vrijednost pisati u ćeliji A5 nakon što korisnik pritisne tipku [Enter] na tipkovnici?

M	0,31
M (O)	0,30
ID	0,34



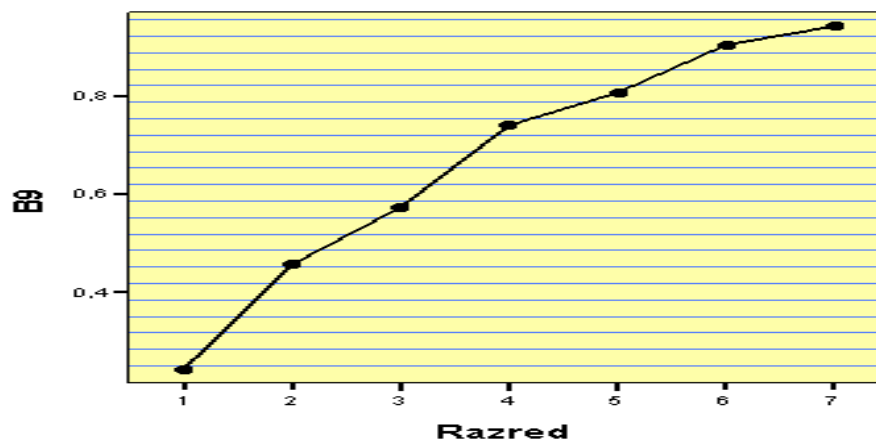
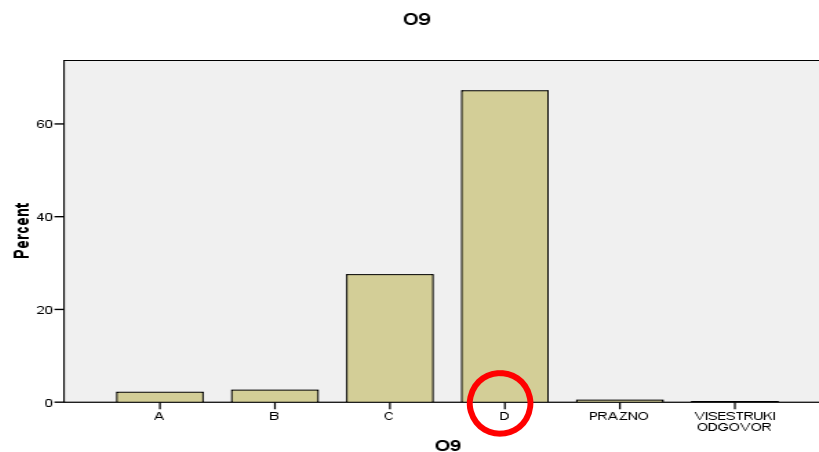
8. Na slici su prikazani rezultati neke top liste.
Koliko je osoba svoj glas dalo Lani Jurčević ako je
poznato da je glasovalo ukupno 1200 osoba?

M	0,84
M (O)	0,40
ID	0,31



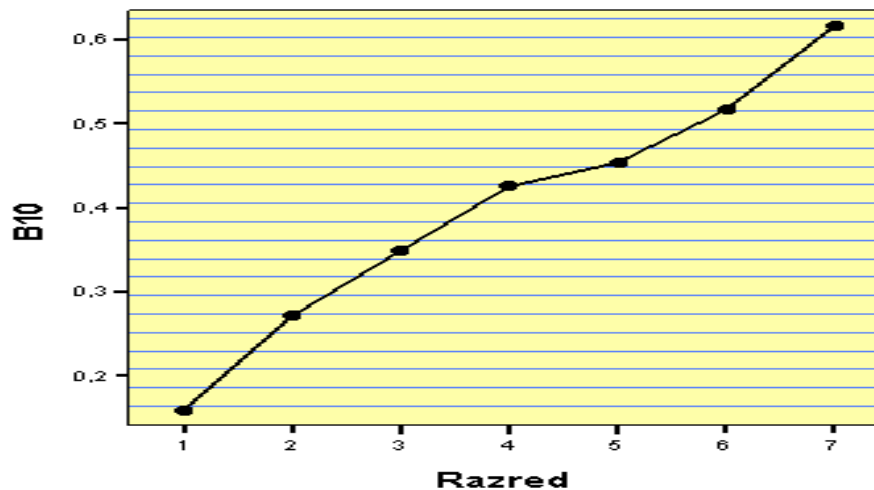
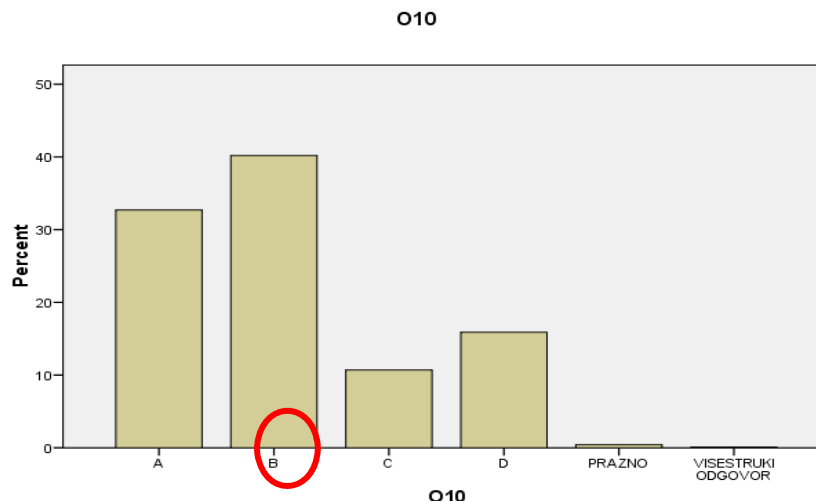
9. Na memorijskome ključiću od 2 GB pohranjene su 3 datoteke. Veličine datoteka su 1536 kB, 512 kB i 46 MB. Koliko je slobodnoga prostora preostalo na memorijskome ključiću?

M	0,67
M (O)	0,40
ID	0,42



10. Kojoj vrsti medija za pohranu podataka pripada memorijski ključić (USB *flash* memorija)?

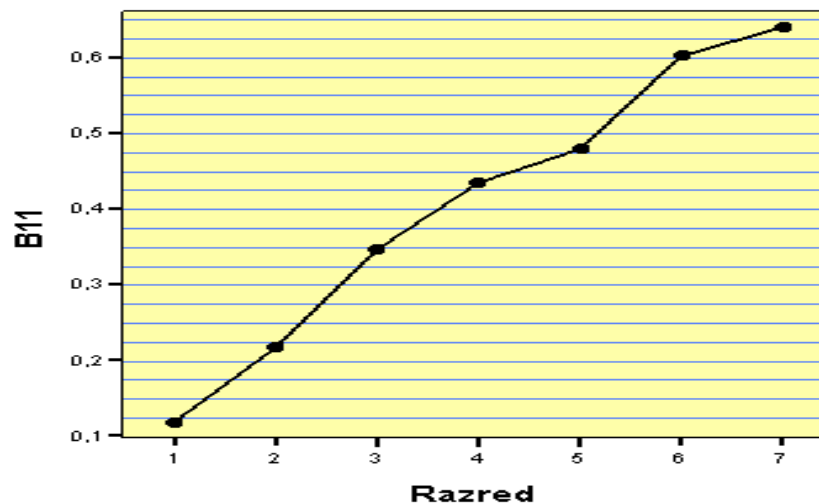
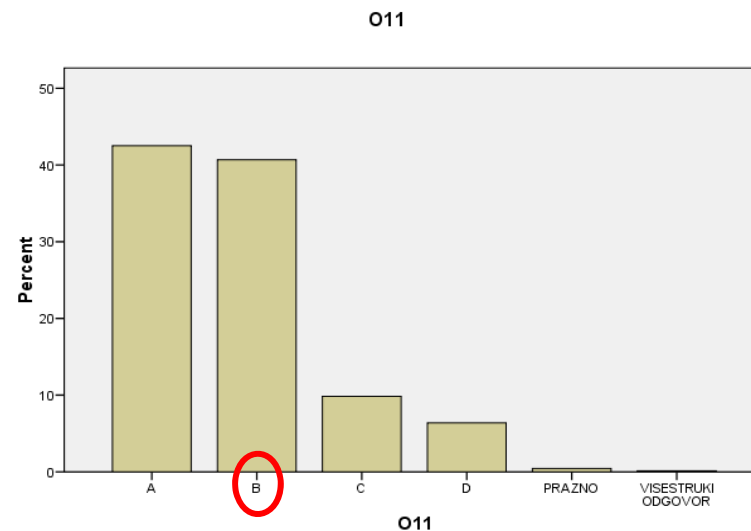
M	0,40
M (O)	0,60
ID	0,22





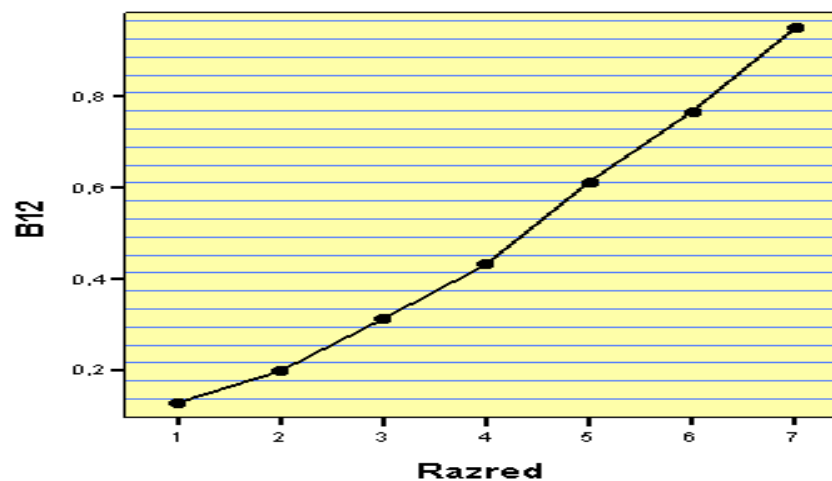
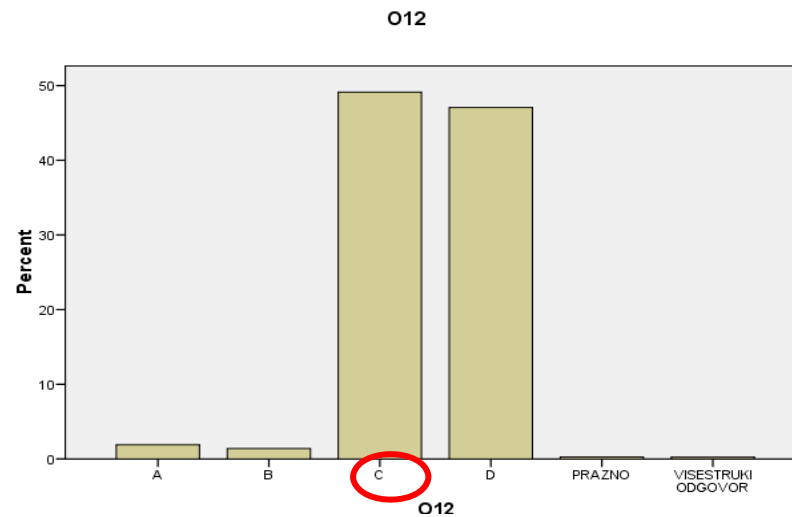
11. Koja je od navedenih memorija najbrža?

M	0,41
M (O)	0,80
ID	0,30



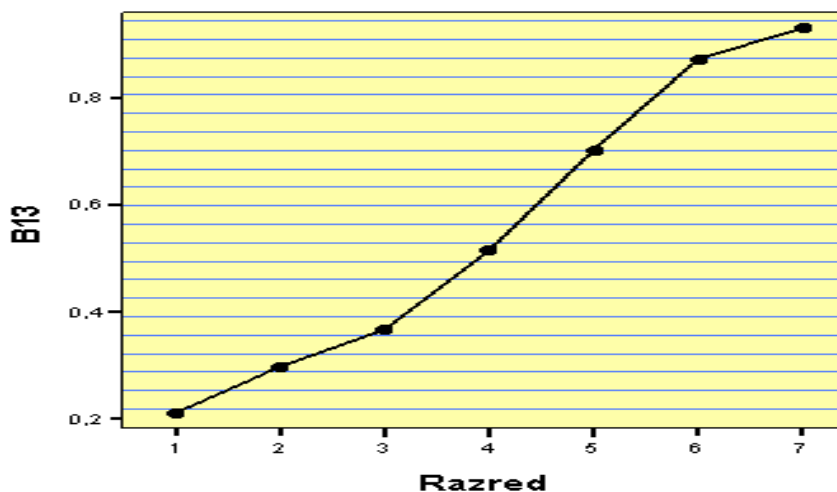
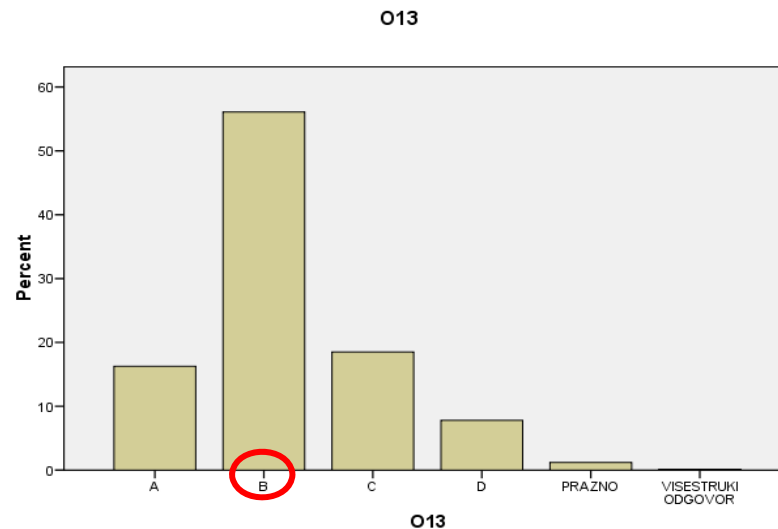
12. Koji od brojeva nije zapis broja u oktalnome sustavu?

M	0,49
M (O)	0,80
ID	0,51



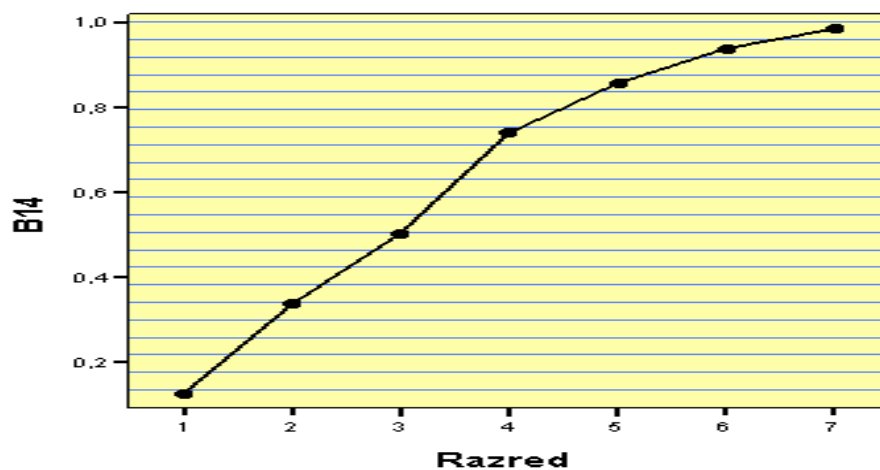
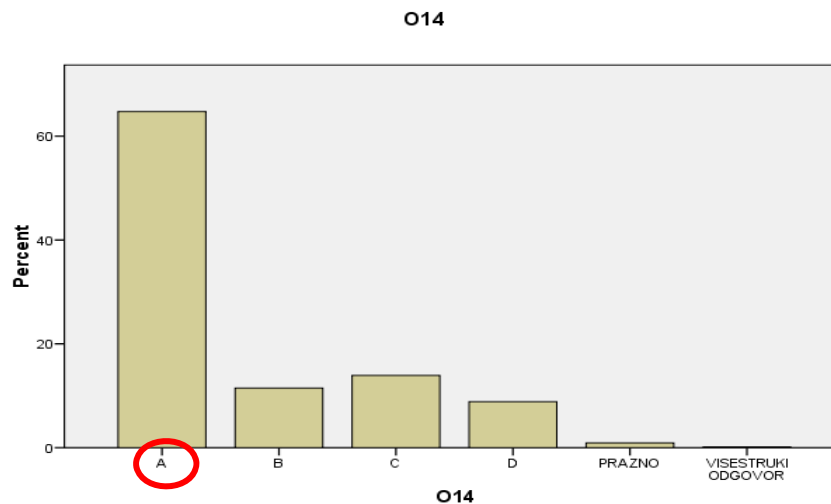
13. Koji je oktalni zapis heksadekadskega broja 2345?

M	0,56
M (O)	0,50
ID	0,46



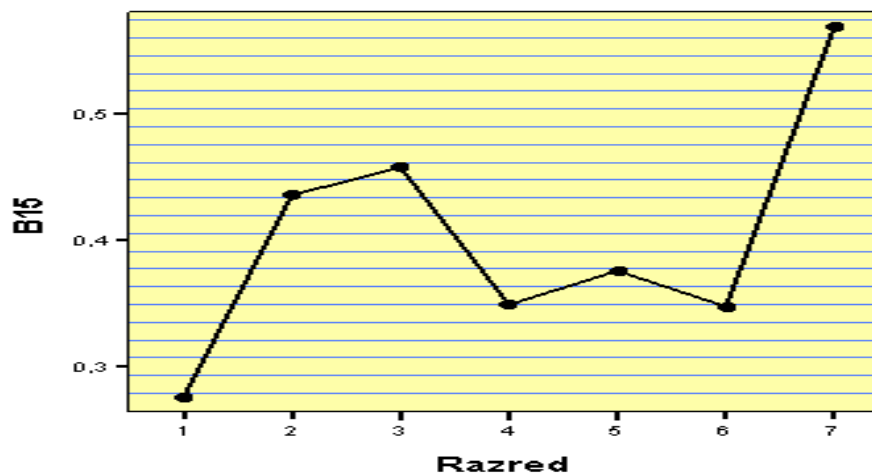
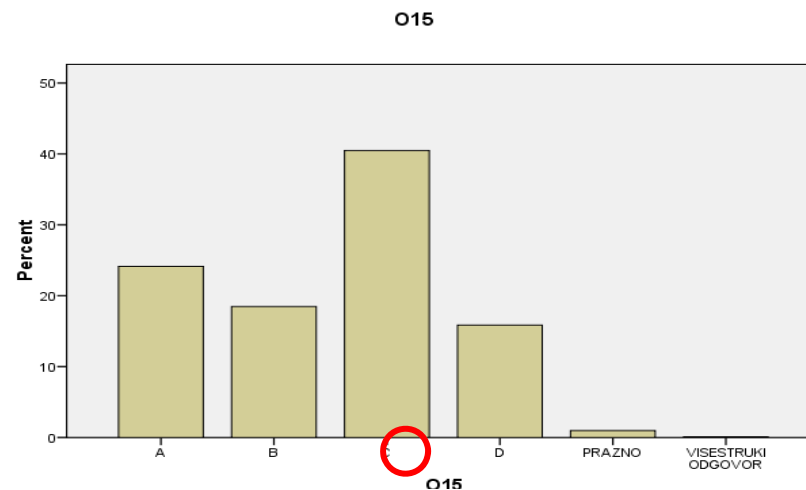
14. Koji je binarni zapis heksadekadskega broja **BCDE**?

M	0,65
M (O)	0,70
ID	0,55



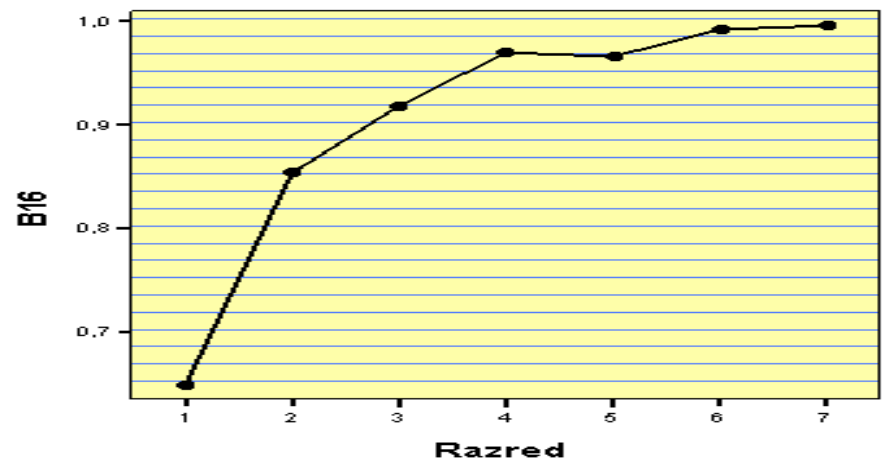
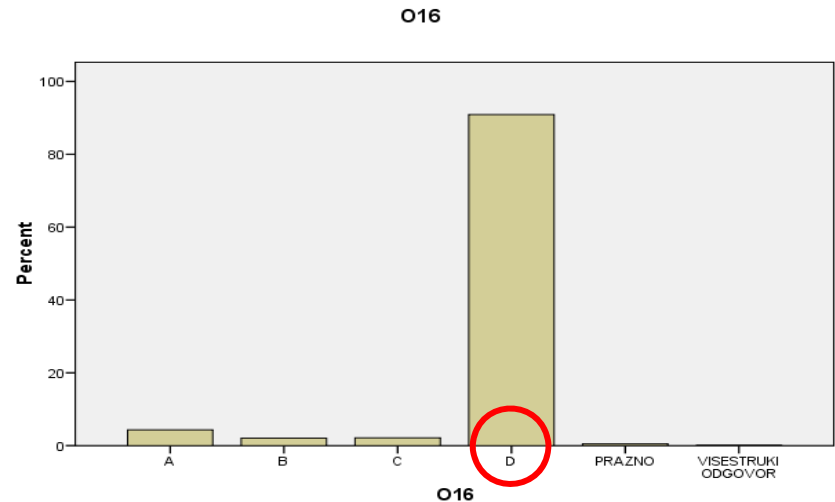
15. Koji se najmanji cijeli broj (u dekadskome brojevnome sustavu) može zapisati u 8-bitovnom registru ako se za zapis cijeloga broja rabi metoda dvojnoga komplementa?

M	0,40
M (O)	0,20
ID	0,42



16. Niz heksadekadskih vrijednosti **53 54 49 4C** predstavlja tekst zapisan ASCII kodom. Koji je tekst zapisan tim nizom (rabite tablicu 2.)?

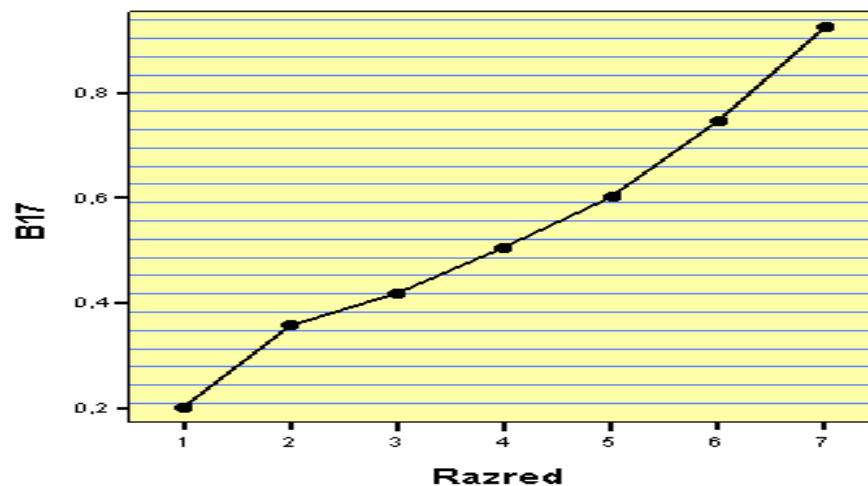
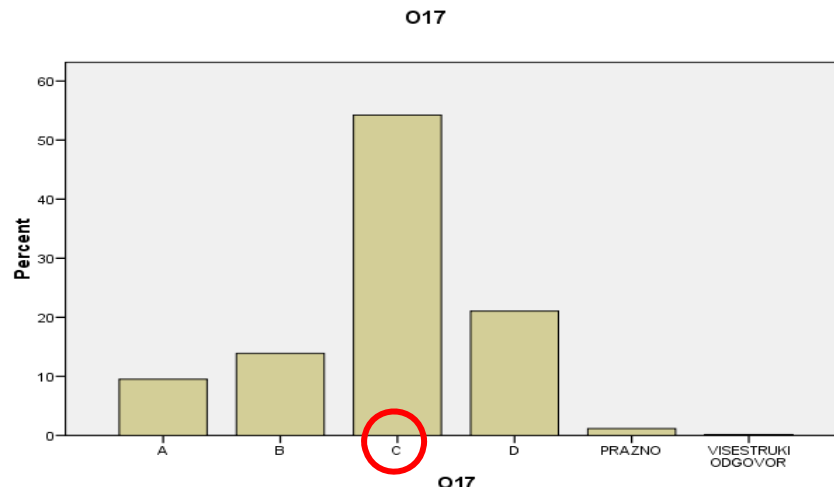
M	0,91
M (O)	0,80
ID	0,29



17. Koji će oblik nakon pojednostavljenja imati logička formula

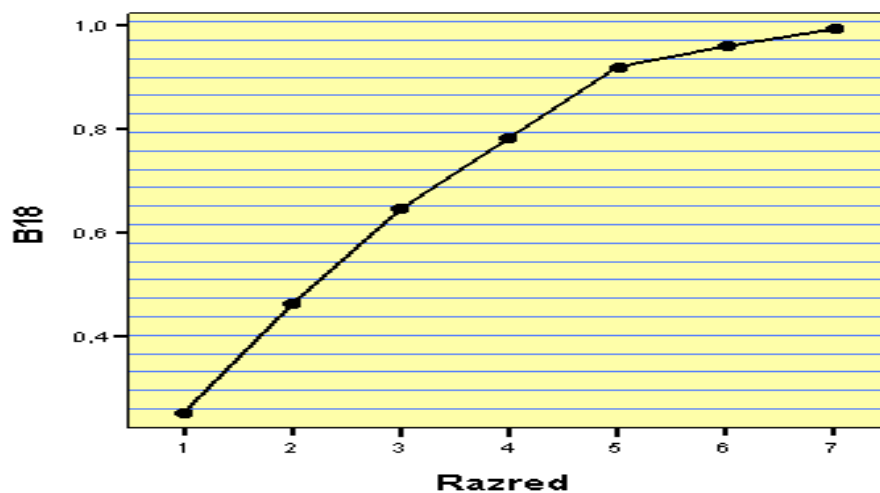
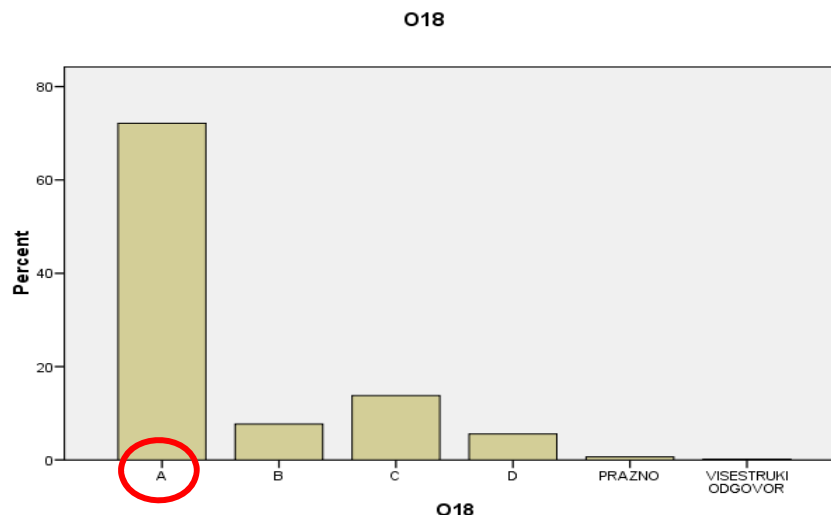
$$A \cdot C \cdot (\bar{A} + B) + B \cdot \bar{C} \cdot (A + \bar{B}) ?$$

M	0,54
M (O)	0,40
ID	0,39



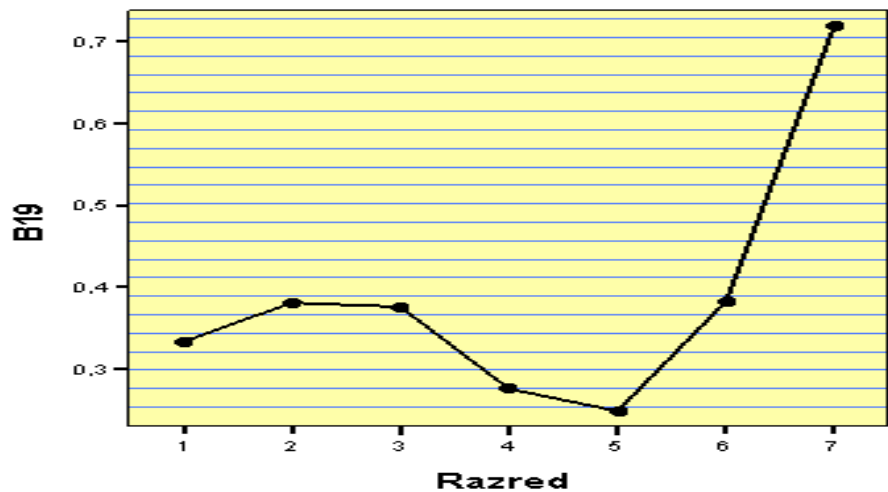
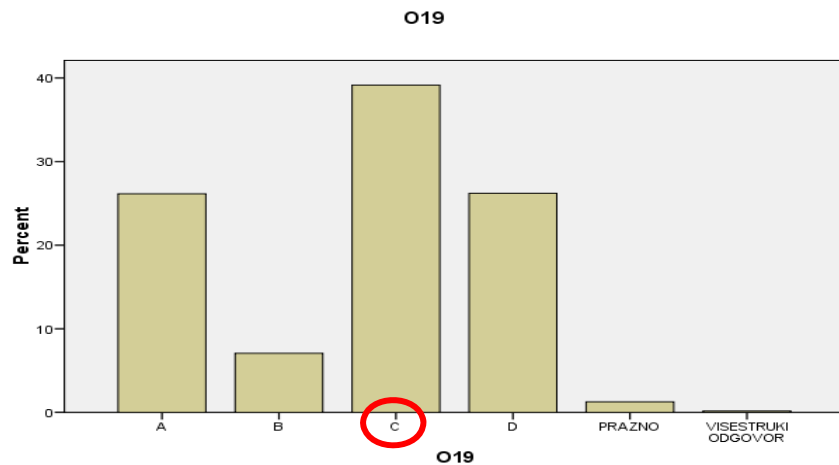
18. Koja je logička jednadžba sklopa prikazanoga na slici?

M	0,72
M (O)	0,60
ID	0,49



19. Koja je pojednostavljena logička jednadžba sklopa prikazanoga na slici?

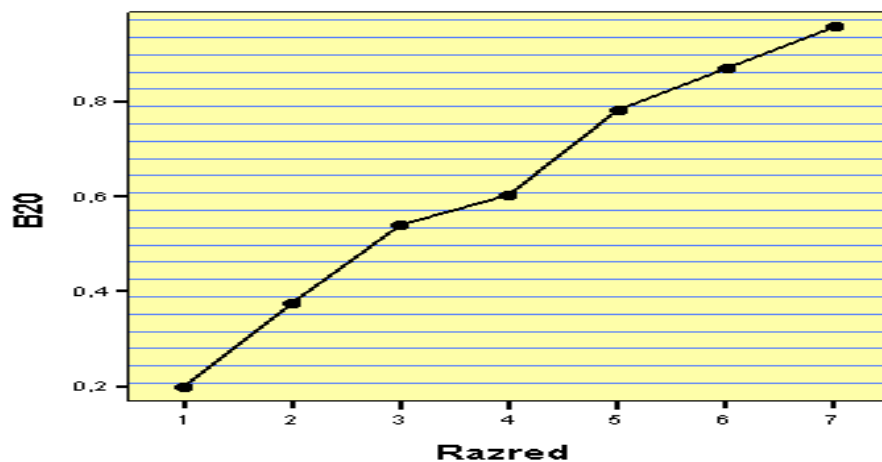
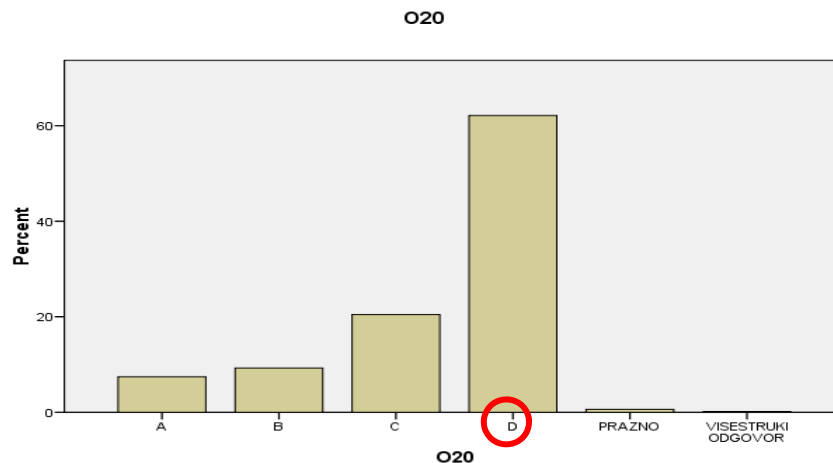
M	0,39
M (O)	0,40
ID	0,12



20. Kolika je vrijednost cjelobrojne varijable a nakon izvršavanja sljedeće naredbe (div je operator cjelobrojnoga dijeljenja, a mod operator ostatka cjelobrojnoga dijeljenja)?

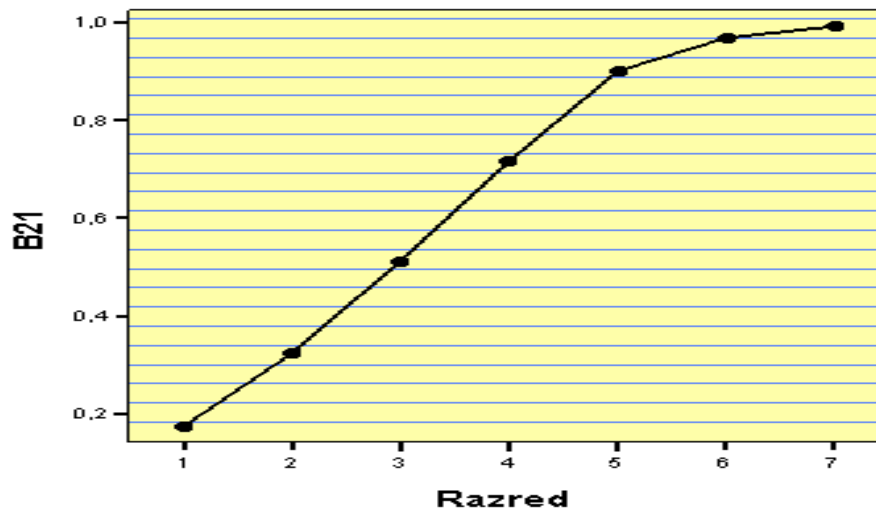
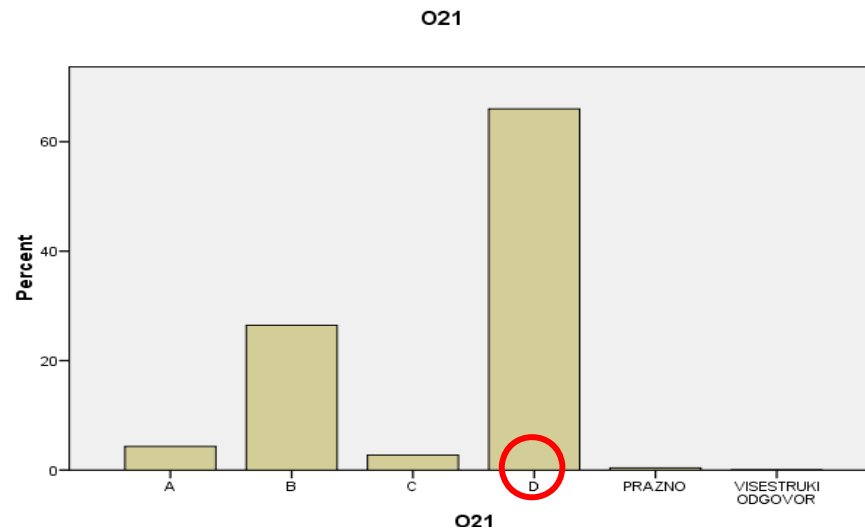
a := 35 div 5 mod 2 + 19 mod 5;

M	0,62
M (O)	0,80
ID	0,46



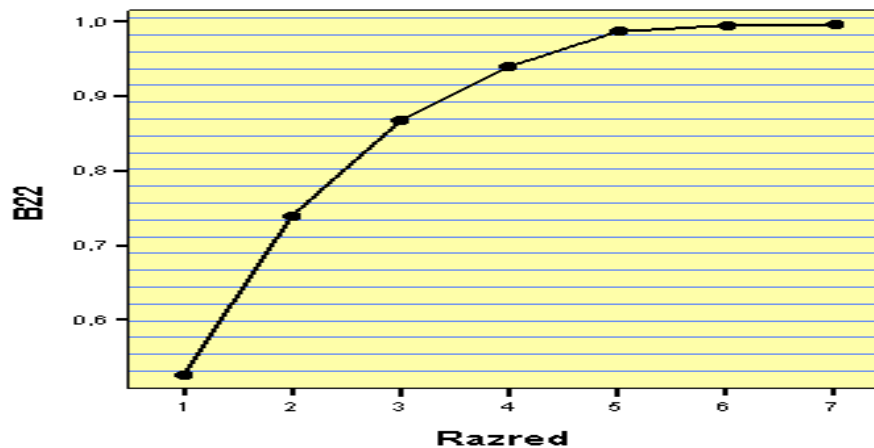
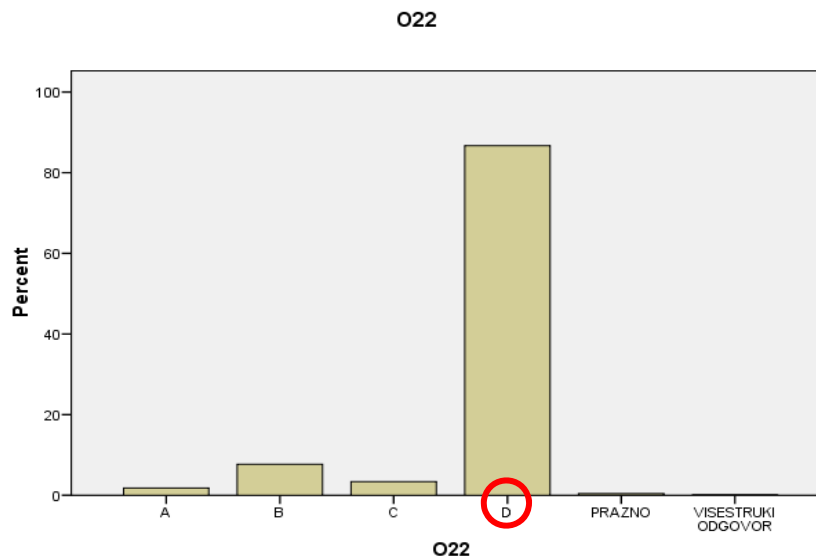
21. Koju će vrijednost imati varijabla x nakon izvođenja sljedećega dijela programa?

M	0,66
M (O)	0,50
ID	0,56



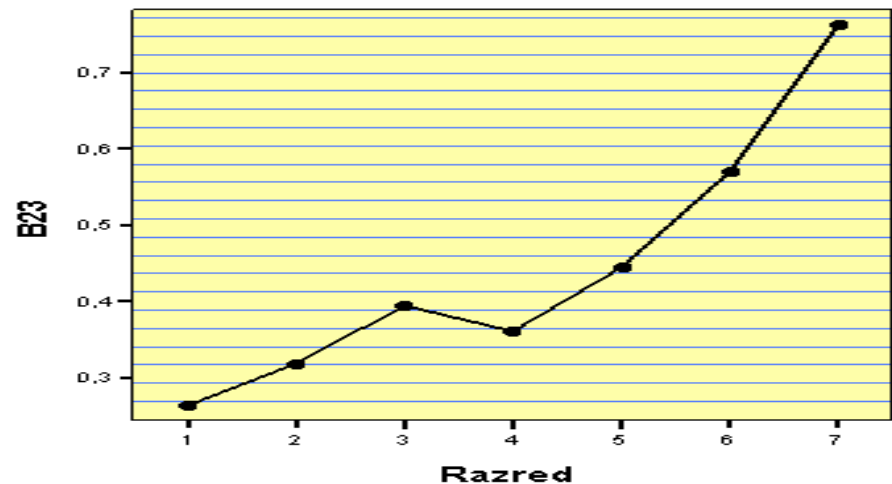
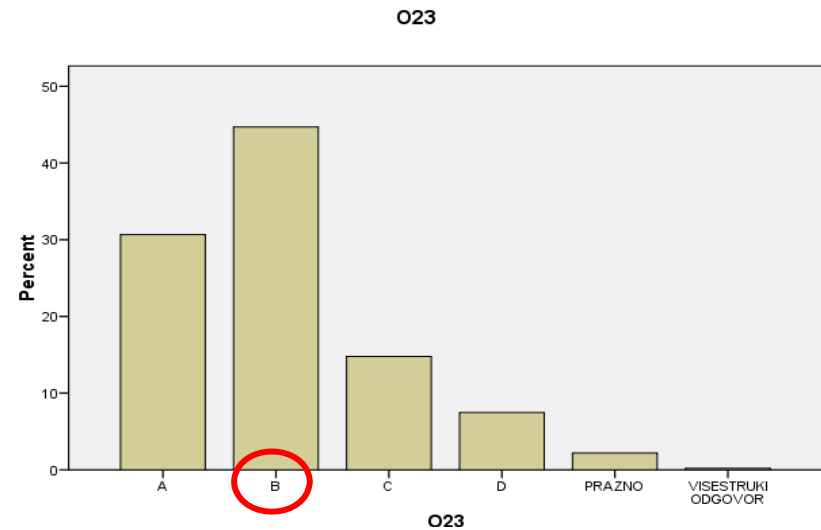
22. Što će ispisati sljedeći dio programa?

M	0,87
M (O)	0,80
ID	0,37



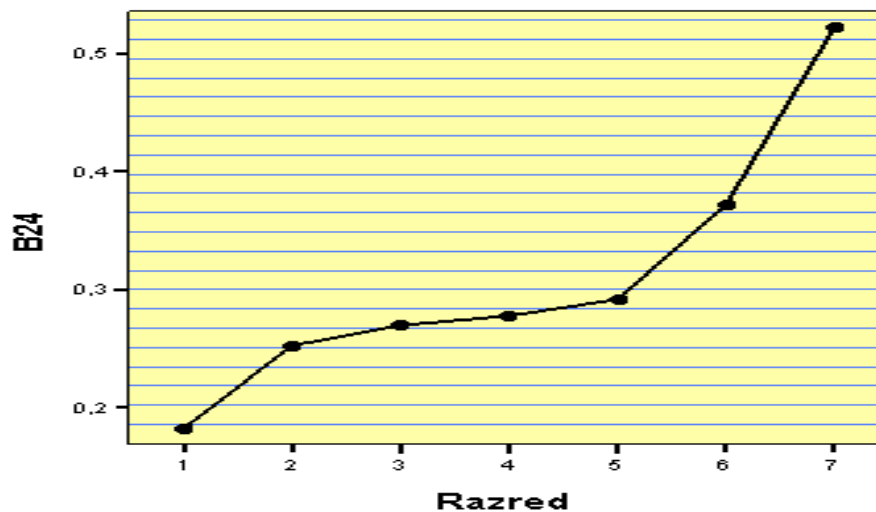
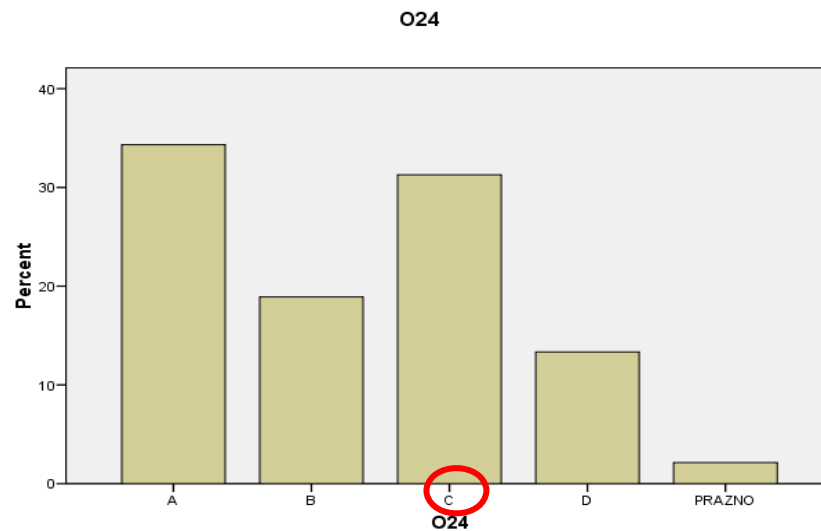
23. Koju će vrijednost imati varijabla t nakon izvođenja dijela programa?

M	0,45
M (O)	0,30
ID	0,25



24. Što će ispisati sljedeći dio programa?

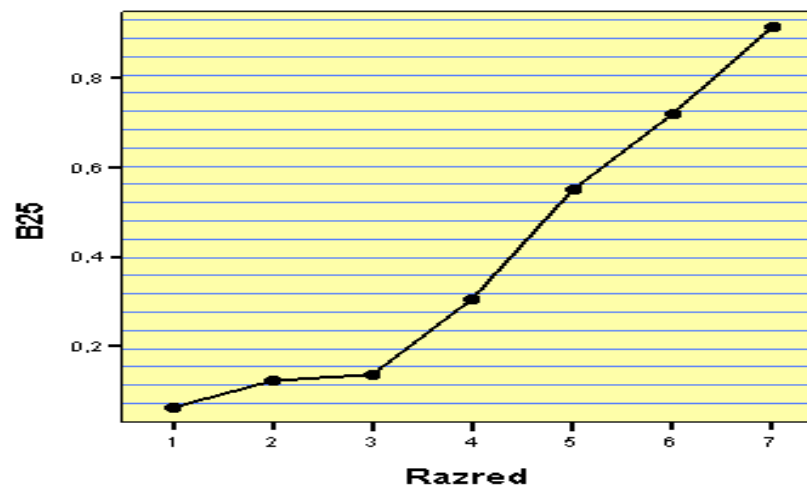
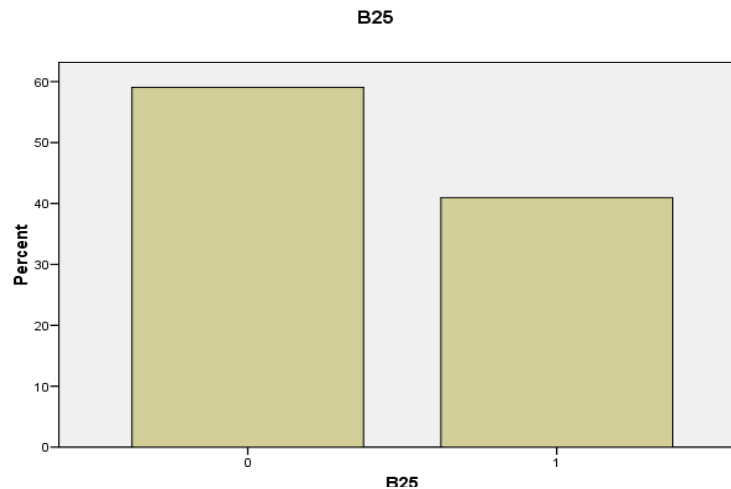
M	0,31
M (O)	0,40
ID	0,15



II. Zadatci kratkih odgovora

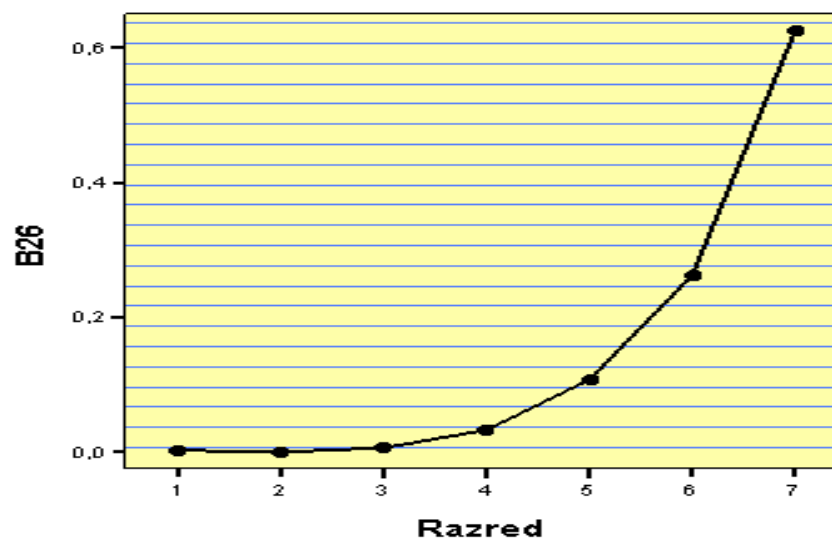
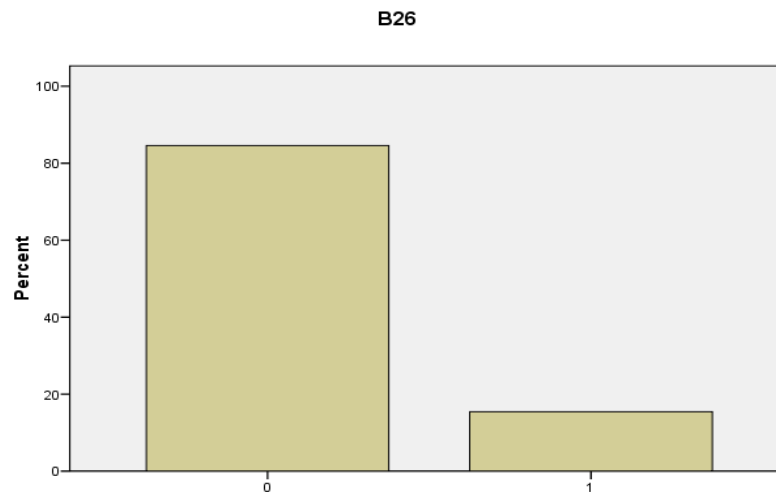
25. Koja će biti vrijednost varijable t nakon izvođenja sljedećega dijela programa?

M	0,41
M (O)	0,50
ID	0,56



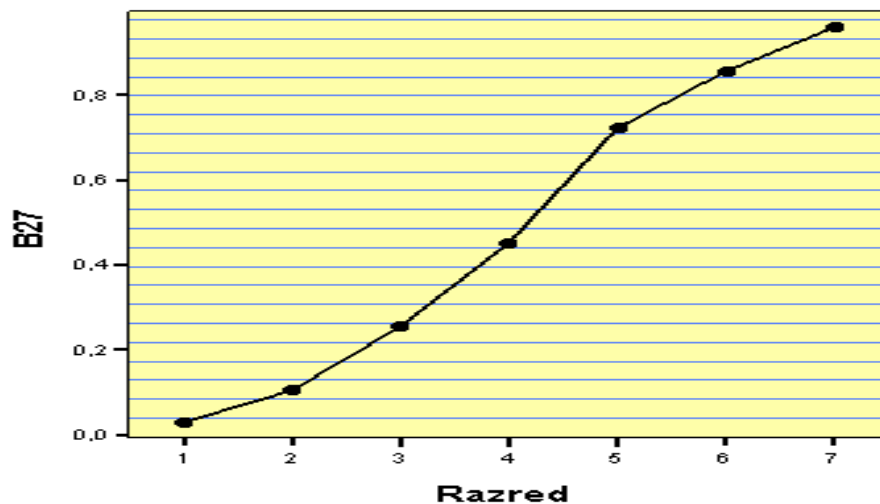
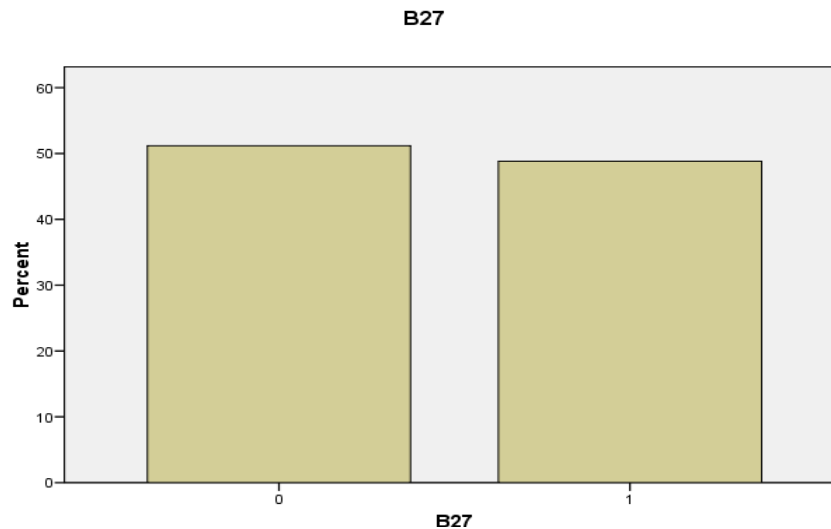
26. Što će ispisati sljedeći dio programa?

M	0,15
M (O)	0,30
ID	0,51



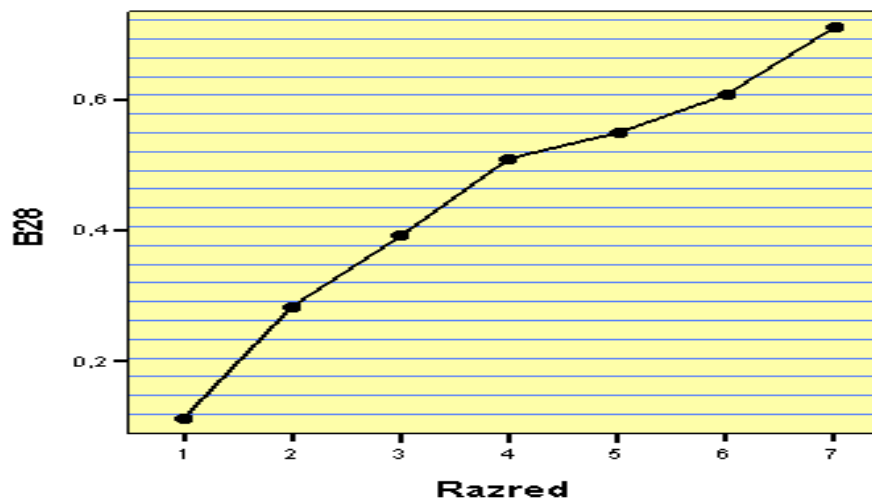
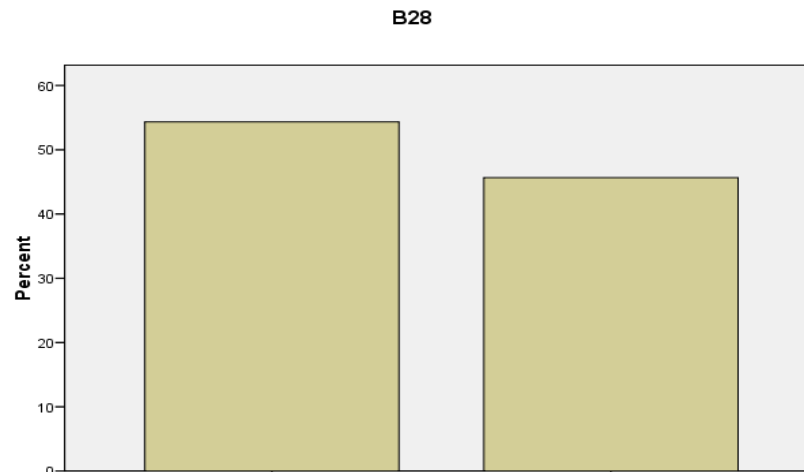
27. Što će ispisati sljedeći dio programa?

M	0,49
M (O)	0,60
ID	0,63



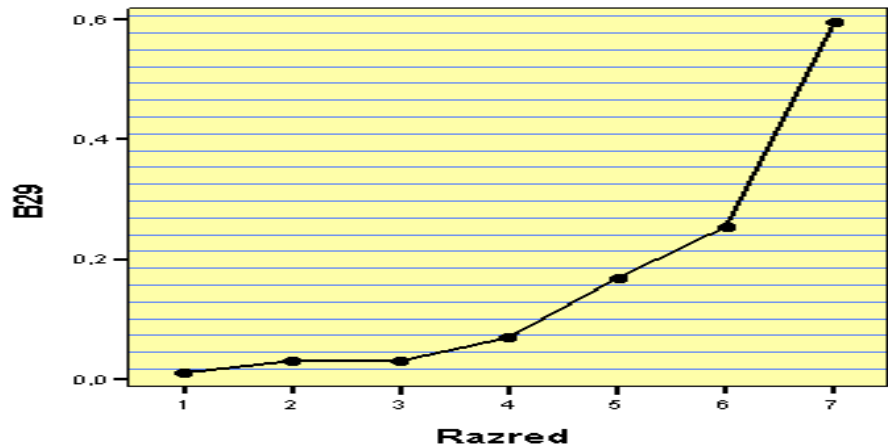
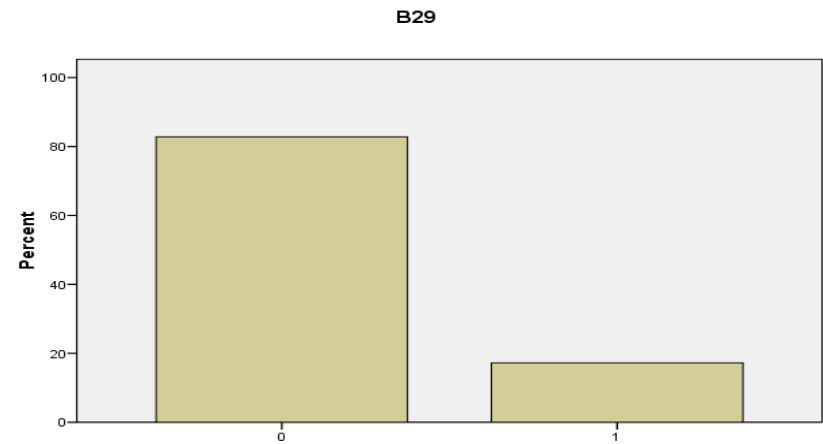
28. Kako se naziva sustav programa smješten u ROM memoriji koji se prvi pokreće prilikom uključivanja računala?

M	0,46
M (O)	0,40
ID	0,30



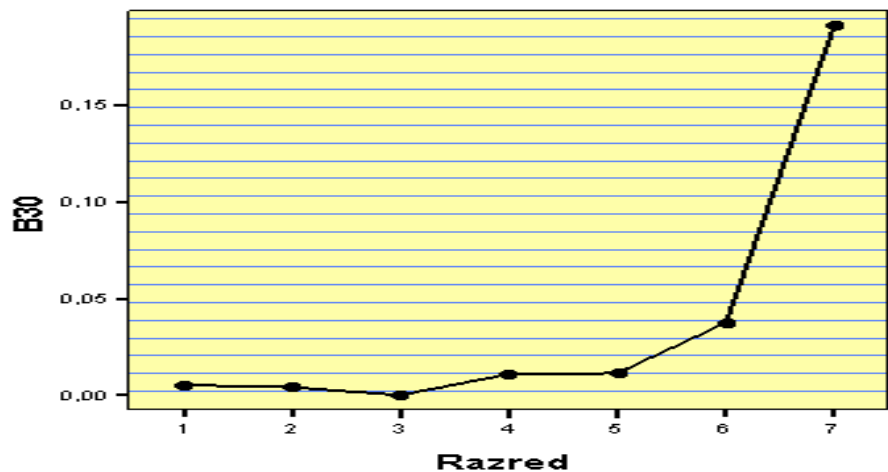
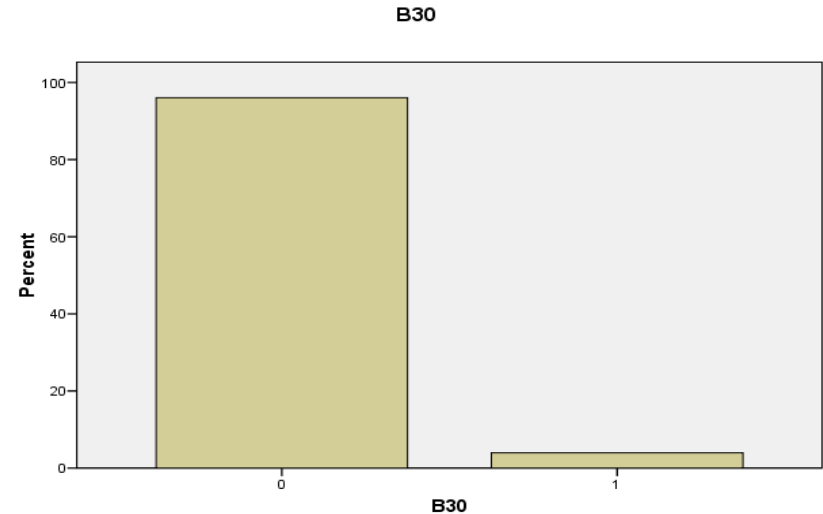
29. Koliko će prostora (u megabajtima) u memoriji zauzeti datoteka u kojoj je pohranjano 128 stranica teksta ako na jednu stranicu pisanu u tekstualnome editoru stane 4096 znakova, a za zapis znaka rabimo 16-bitovni kôd?

M	0,17
M (O)	0,40
ID	0,46



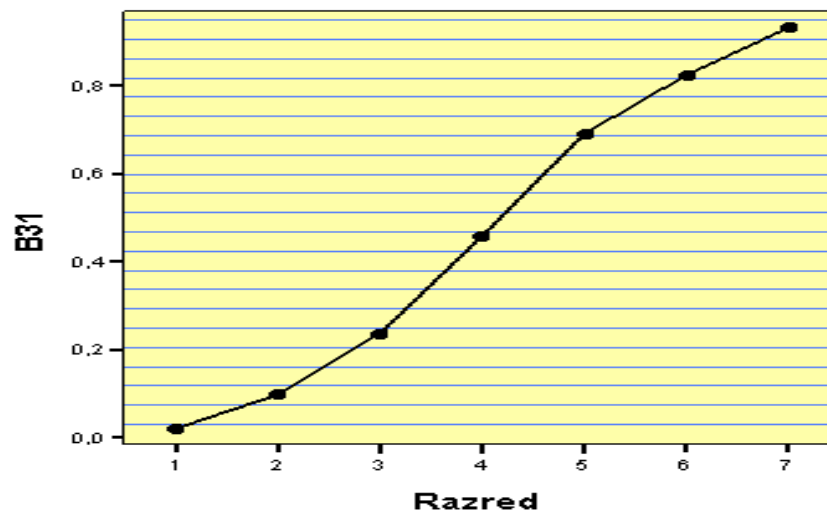
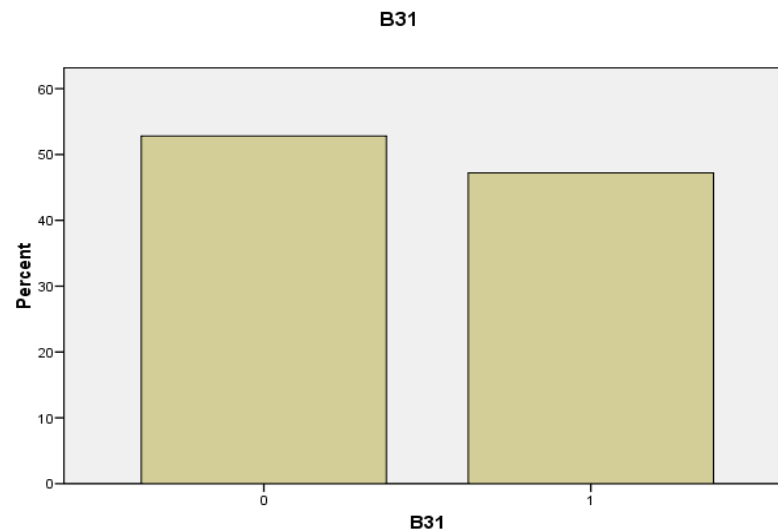
30. Logički izraz $\overline{A + \overline{B} + \overline{A} \cdot \overline{B}}$ napišite tako da rabite samo operacije disjunkcije i negacije.

M	0,04
M (O)	0,50
ID	0,28



31. Koji je binarni zapis broja $(536B)_{16}$?

M	0,47
M (O)	0,80
ID	0,61



32. Popunite tablicu istinitosti za sklop prikazan na slici.

M	0,41
M (O)	0,60
ID	0,59

