

17. veljače 2023. od 09:00 do 11:00

²⁰²³**Natjecanje** *iz informatike*

Županijsko natjecanje / Osnovna škola (5. razred)
Algoritmi (Logo)

SLUŽBENI TEST PRIMJERI



Agencija za odgoj i obrazovanje
Education and Teacher Training Agency



HRVATSKI SAVEZ
INFORMATIČARA



Ministarstvo znanosti,
obrazovanja i sporta

Uputa za bodovanje

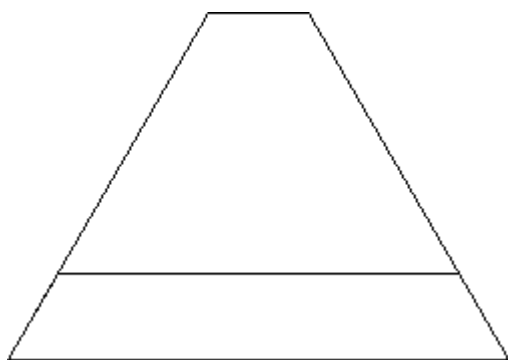
Svaki se zadatak boduje pomoću unaprijed koncipiranih test podataka koje možete pronaći u nastavku ovog dokumenta. Pojedini test podatak definiran je ulazom (pozivom programa), službenim izlazom te brojem bodova koje je na tom test podatku moguće osvojiti. Bodovi se na pojedinom test podatku dodjeljuju samo ako se izlaz programa slaže sa službenim izlazom te je program, unutar predviđenog vremenskog ograničenja od jedne sekunde po test podatku, **regularno** završio s izvođenjem. Regularno završavanje programa podrazumijeva da se prilikom izvršavanja nije pojavila nikakva poruka o pogrešci. Izlaz programa u jeziku FMS Logo može biti grafički ili tekstualan (brojevi, riječi, liste). U slučaju tekstualnog izlaza, rješenje smatramo ispravnim samo ako je identično službenom rješenju. Primjerice, ako je ispravno rješenje nekog test primjera riječ "BANANA, izlazi poput ["BANANA] ili [B A N A N A] ne smatraju se ispravnim. U slučaju grafičkog izlaza, rješenje smatramo ispravnim samo ako je lik na ekranu ekvivalentan liku u službenom rješenju. Prilikom uspoređivanja likova, ako u zadatku nije drugačije navedeno, njegova nam pozicija na ekranu nije bitna. Formalnije, ako je službeno rješenje moguće dobiti postupcima **translacije** i/ili **rotacije** nacrtanog lika, tada izlaz programa smatramo ispravnim. Ovdje je važno istaknuti da prije pokretanja svakog primjera ekran treba biti obrisani, olovka mora biti spuštena, a boje za crtanje i ispunu trebaju biti postavljene na pretpostavljane (default) vrijednosti. Ovo možete osigurati tako da prije pokretanja svakog primjera upišete `CS PD SETPC 0 SETFC 0`. Da bi se rješenje smatralo ispravnim, obrubne crte likova na ekranu moraju biti nacrtane crnom bojom, osim ako drukčije nije navedeno u tekstu zadatka. Rješenja koja na mjestu kružnica radijusa 0 crtaju točku, priznaju se, kao i rješenja koja ne crtaju ništa na tom mjestu. Test podaci u kojima program ispisuje grešku smatraju se netočnima i boduju s 0 bodova.

Konačno, u sklopu nekih zadataka nalazi se sekcija **Bodovanje** koja, osim što natjecatelju pruža uvid u bodovanje pojedinih dijelova zadatka, može sadržavati informacije koje upotpunjuju ili nadjačavaju opće smjernice za bodovanje dane u prethodnim odlomcima.

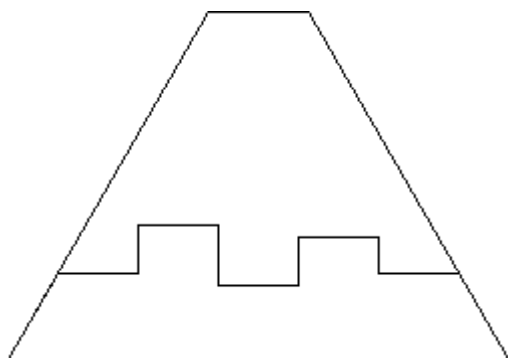
Zadatak 1: Vulkan

30 bodova

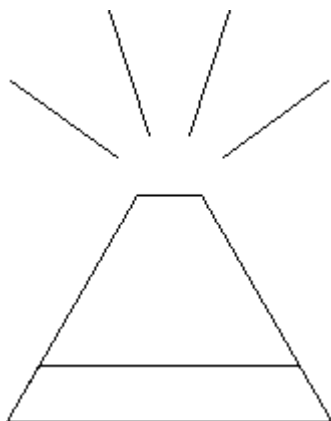
Broj	Ulaz	Slika	Bodovi
1	CS VULKAN 200 0 0	Vulkan_1.bmp	6
2	CS VULKAN 200 120 0	Vulkan_2.bmp	6
3	CS VULKAN 130 0 4	Vulkan_3.bmp	6
4	CS VULKAN 140 20 10	Vulkan_4.bmp	6
5	CS VULKAN 140 140 1	Vulkan_5.bmp	6



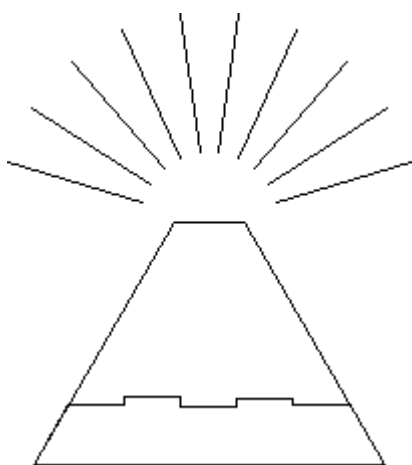
Vulkan_1.bmp



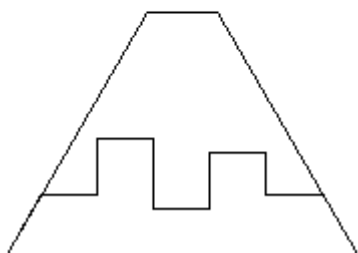
Vulkan_2.bmp



Vulkan_3.bmp



Vulkan_4.bmp

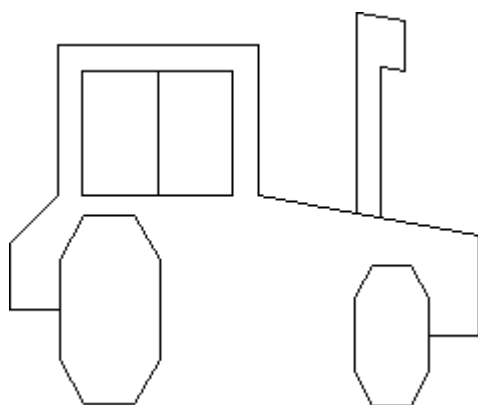


Vulkan_5.bmp

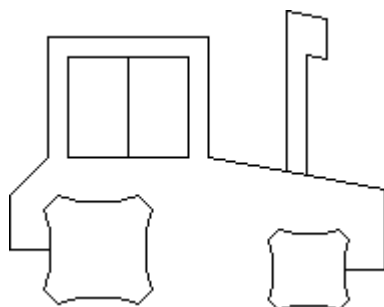
Zadatak 2: Traktor

40 bodova

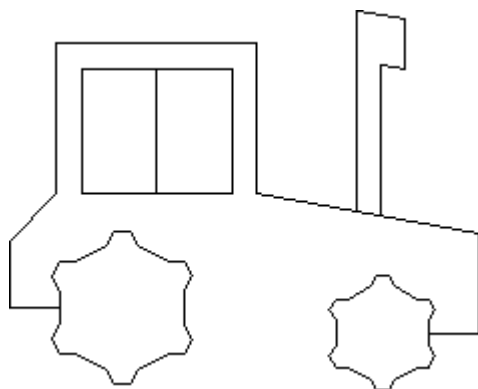
Broj	Ulaz	Slika	Bodovi
1	CS TRAKTOR 100 4 0	Traktor_1.bmp	4
2	CS TRAKTOR 80 8 0	Traktor_2.bmp	4
3	CS TRAKTOR 100 12 0	Traktor_3.bmp	4
4	CS TRAKTOR 140 20 0	Traktor_4.bmp	4
5	CS TRAKTOR 140 32 0	Traktor_5.bmp	4
6	CS TRAKTOR 130 56 0	Traktor_6.bmp	4
7	CS TRAKTOR 125 40 1	Traktor_7.bmp	4
8	CS TRAKTOR 110 36 1	Traktor_8.bmp	4
9	CS TRAKTOR 90 4 1	Traktor_9.bmp	4
10	CS TRAKTOR 75 8 1	Traktor_10.bmp	4



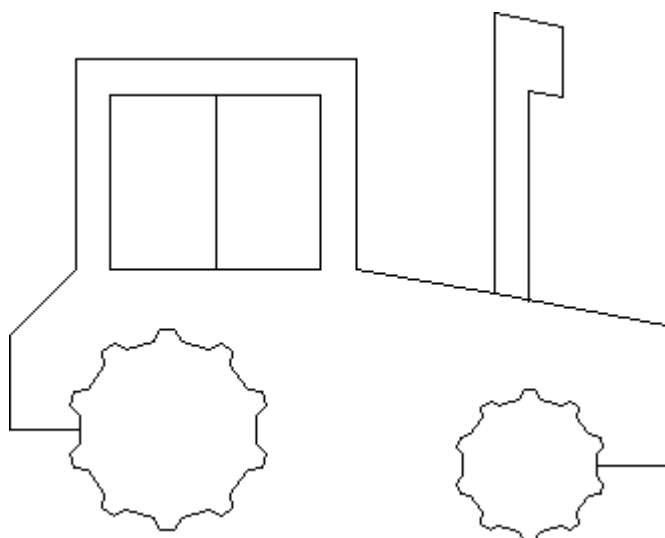
Traktor_1.bmp



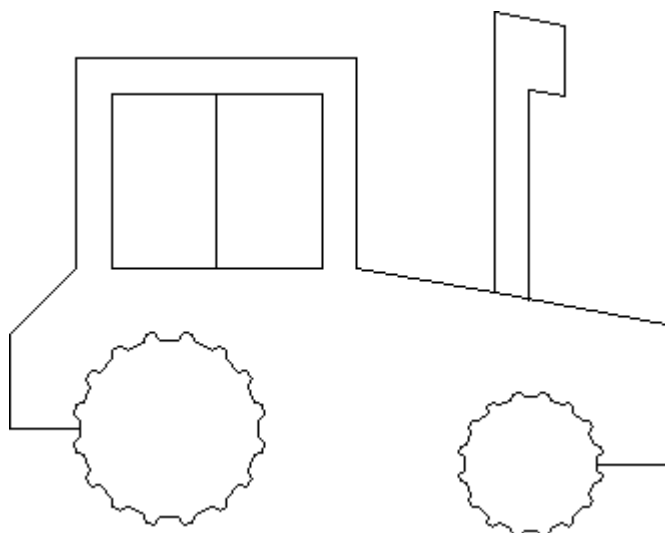
Traktor_2.bmp



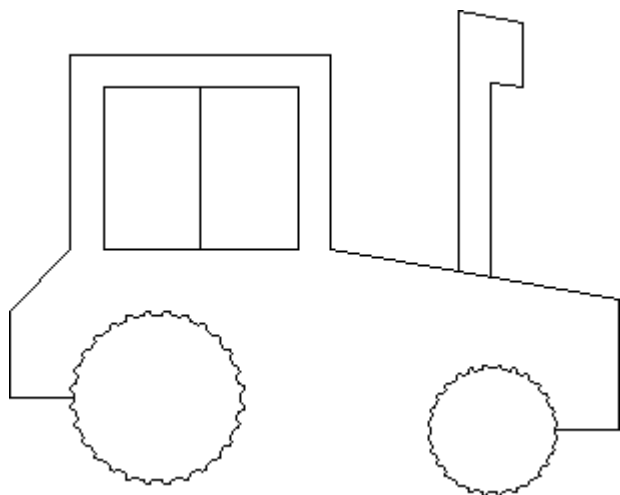
Traktor_3.bmp



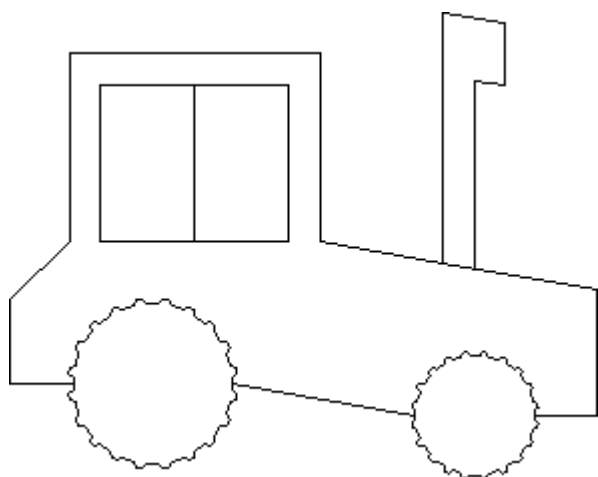
Traktor_4.bmp



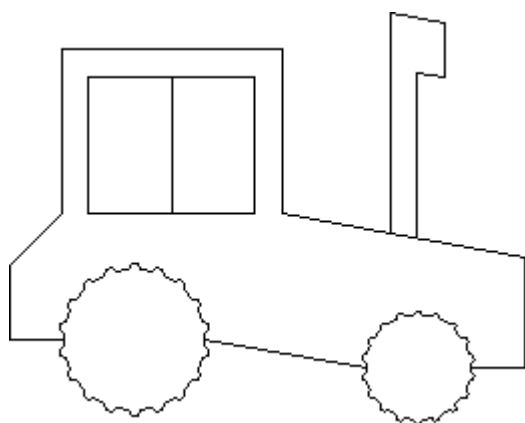
Traktor_5.bmp



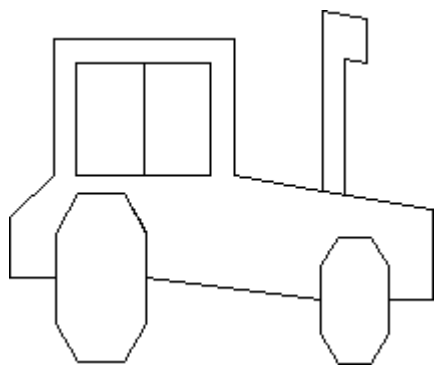
Traktor_6.bmp



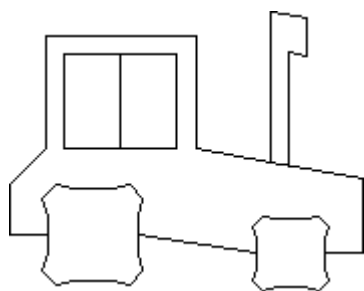
Traktor_7.bmp



Traktor_8.bmp



Traktor_9.bmp

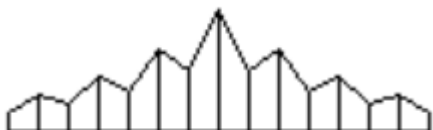


Traktor_10.bmp

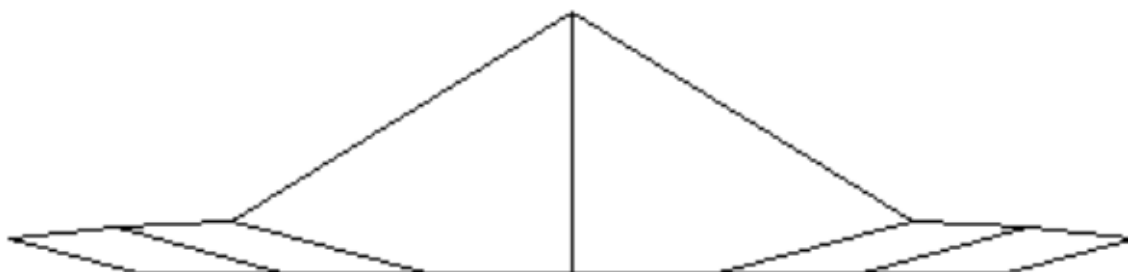
Zadatak 3: Tijara

60 bodova

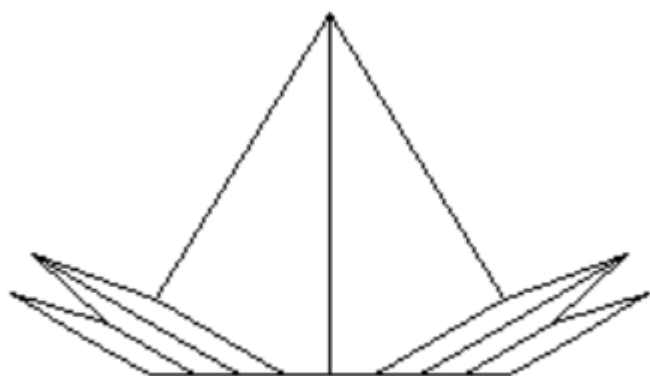
Broj	Ulaz	Slika	Bodovi
1	CS TIJARA 7 10 40 20 90 0	Tijara_1.bmp	6
2	CS TIJARA 3 50 90 70 15 0	Tijara_2.bmp	6
3	CS TIJARA 4 15 120 50 30 0	Tijara_3.bmp	6
4	CS TIJARA 5 30 80 60 90 20	Tijara_4.bmp	6
5	CS TIJARA 6 20 120 50 90 10	Tijara_5.bmp	6
6	CS TIJARA 2 100 100 100 110 30	Tijara_6.bmp	6
7	CS TIJARA 8 20 60 60 15 0	Tijara_7.bmp	6
8	CS TIJARA 1 100 200 100 20 60	Tijara_8.bmp	6
9	CS TIJARA 3 40 200 150 45 10	Tijara_9.bmp	6
10	CS TIJARA 8 30 200 150 30 15	Tijara_10.bmp	6



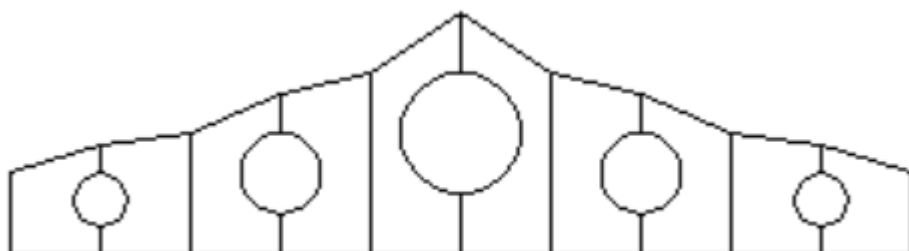
Tijara_1.bmp



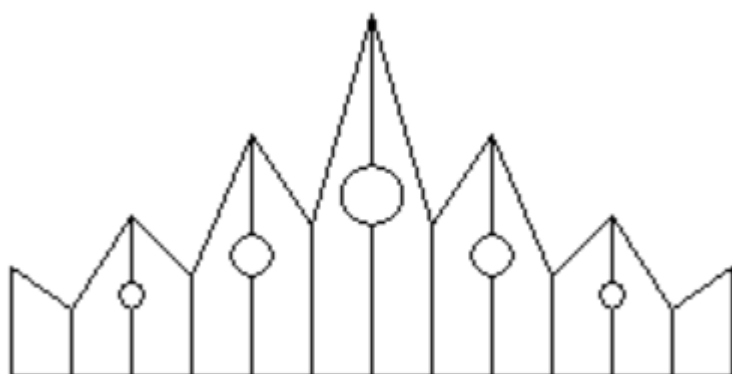
Tijara_2.bmp



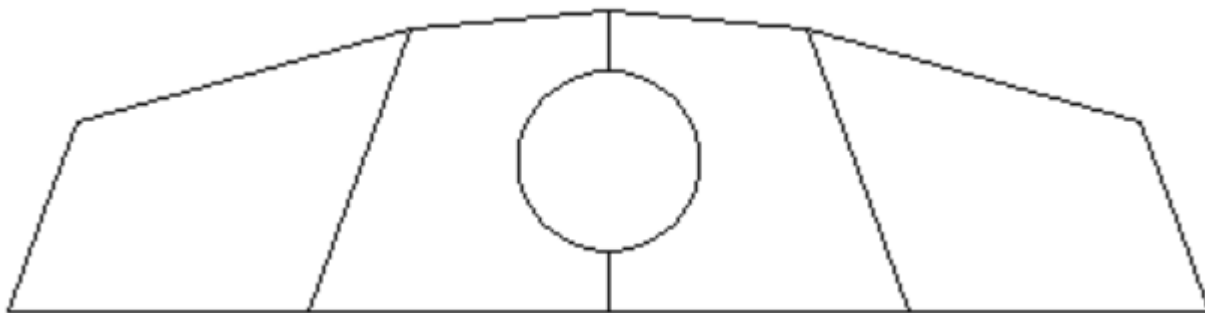
Tijara_3.bmp



Tijara_4.bmp



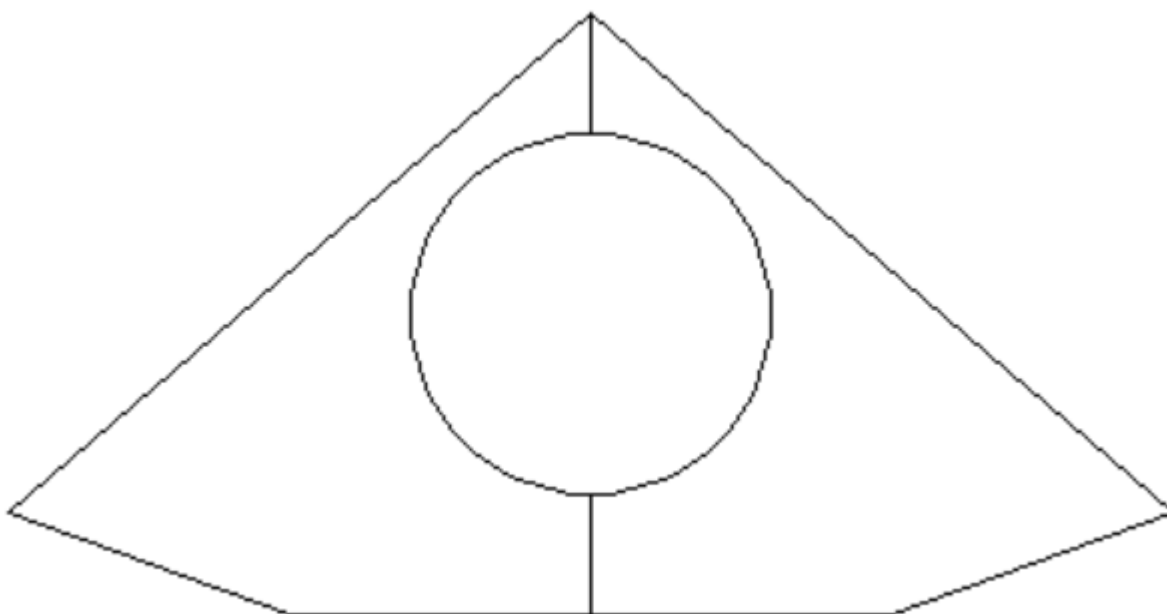
Tijara_5.bmp



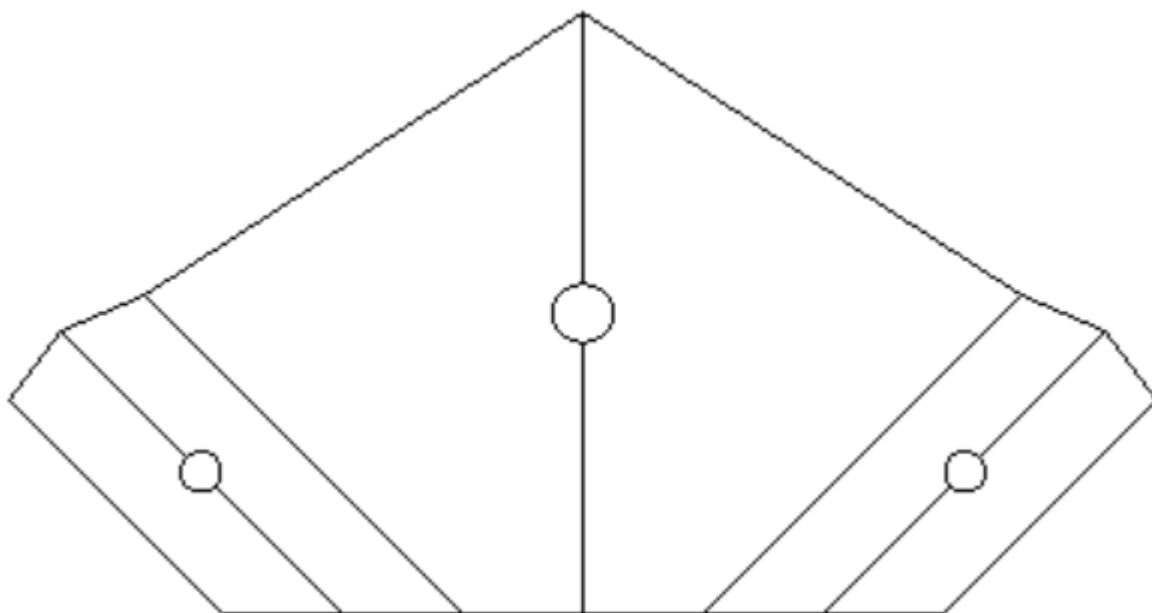
Tijara_6.bmp



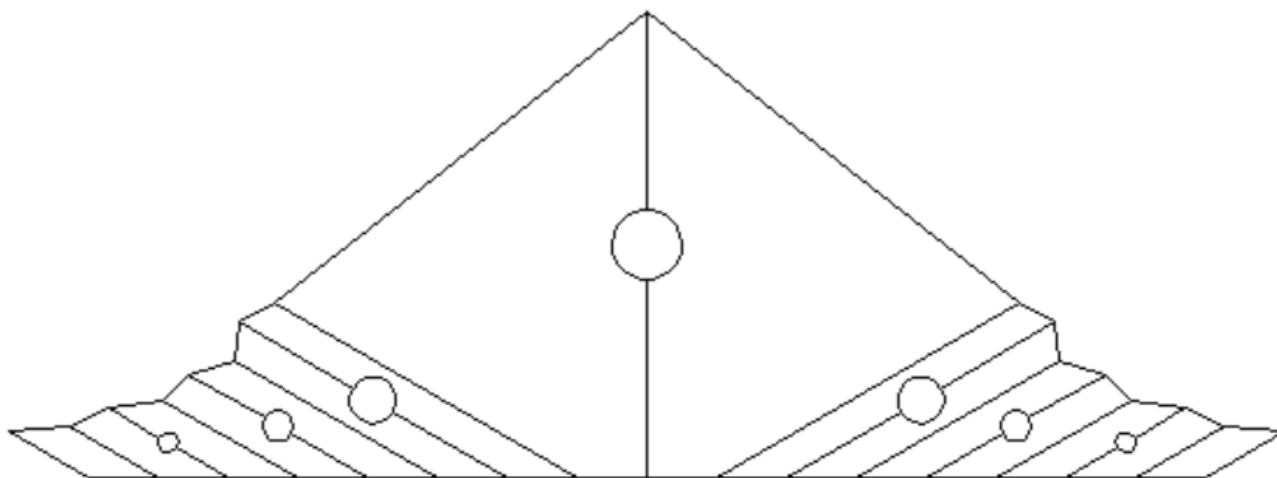
Tijara_7.bmp



Tijara_8.bmp



Tijara_9.bmp

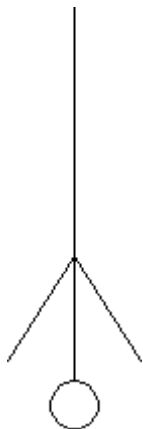


Tijara_10.bmp

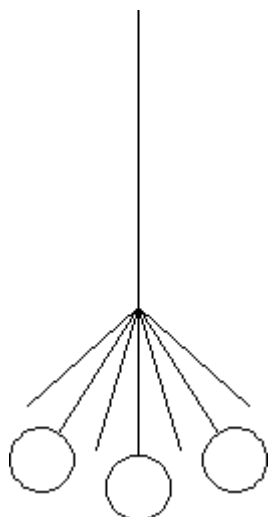
Zadatak 4: Luster

60 bodova

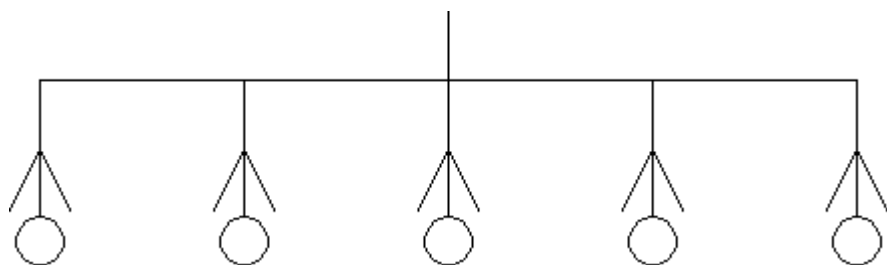
Broj	Ulaz	Slika	Bodovi
1	CS LUSTER 62 1 3 12 65	Luster_1.bmp	7
2	CS LUSTER 74 1 7 16 97	Luster_2.bmp	7
3	CS LUSTER 34 5 3 12 52	Luster_3.bmp	7
4	CS LUSTER 32 5 5 0 104	Luster_4.bmp	7
5	CS LUSTER 28 6 11 0 128	Luster_5.bmp	7
6	CS LUSTER 32 3 5 8 128	Luster_6.bmp	7
7	CS LUSTER 38 4 5 7 90	Luster_7.bmp	7
8	CS LUSTER 24 7 7 7 88	Luster_8.bmp	7
9	CS LUSTER 24 6 19 3 180	Luster_9.bmp	7
10	CS LUSTER 22 7 21 4 160	Luster_10.bmp	7



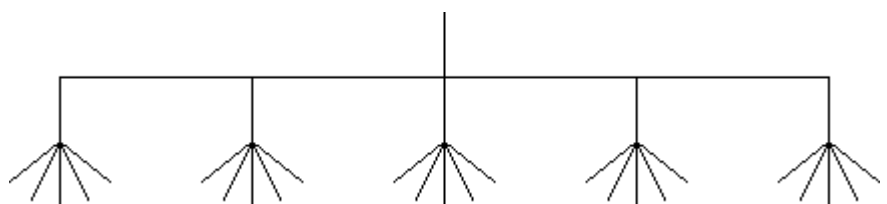
Luster_1.bmp



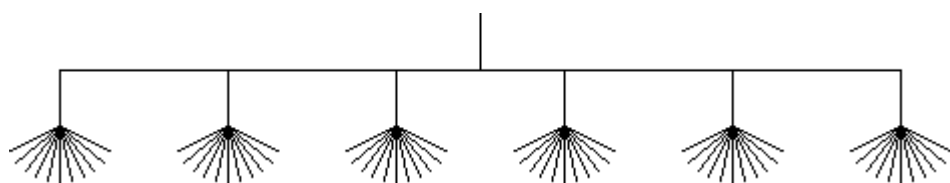
Luster_2.bmp



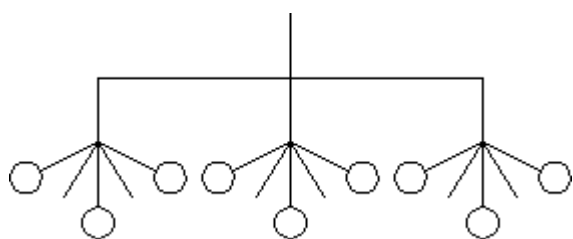
Luster_3.bmp



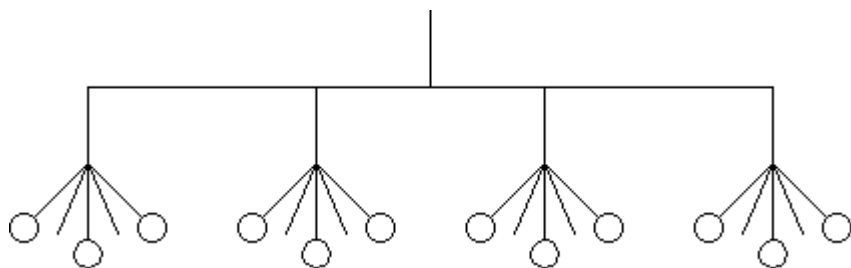
Luster_4.bmp



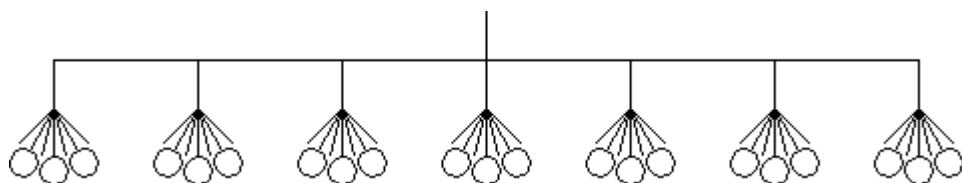
Luster_5.bmp



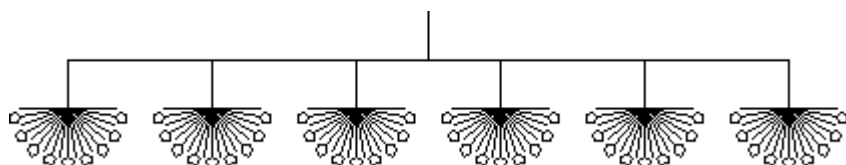
Luster_6.bmp



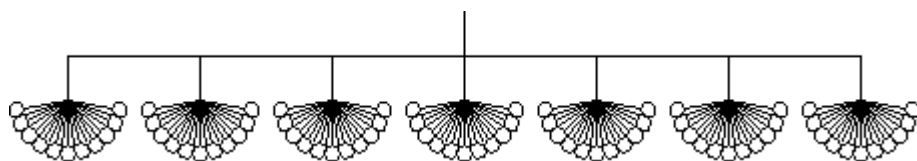
Luster_7.bmp



Luster_8.bmp



Luster_9.bmp



Luster_10.bmp