B171200025 - Gülşah Şevinel

1-)

Eşya NO	1	2	3	4	5	6	7	Çaprazlama oranı = 0.2
Fayda	5	8	3	2	7	9	4	mutasyon oranı = 0.1
Ağırlık	7	8	4	10	4	6	4	kapasite = 22 kg

```
0100111   → 22 kg  - 28$
0000110   → 10 kg  - 16$
0101001   → 22 kg  - 14$
1010110   → 21 kg  - 24$
0110100
1110000   → kapasite aşıldı
```

Rulet çemberi

28 + 16 + 24 + 14 + 18 = 100 → 5 parça
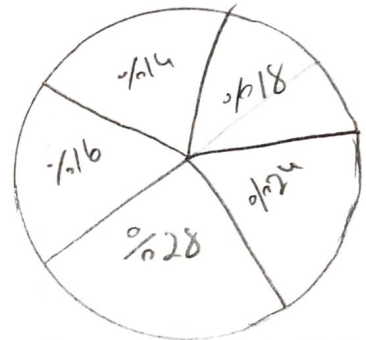
%14   %18
%16   %24
  %28

→ elde edilen sonuç
%24 , %28

2-) 1. karınca

$$(1-0,1)\times 1 + 1/6 = 1,06 \quad AC$$
$$(1-0,1)\times 1 + 1/1 = 1,9 \quad CD$$
$$(1-0,1)\times 1 + 1/5 = 1,1 \quad DB$$
$$(1-0,1)\times 1 + 1/3 = 1,23 \quad BA$$

2. karınca

$$(1-0,1)\times 1 + 1/4 = 1,15 \quad BC$$
$$(1-0,1)\times 1 + 1/1 = 1,9 \quad CD$$
$$(1-0,1)\times 1 + 1/2 = 1,7 \quad DA$$
$$(1-0,1)\times 1 + 1/3 = 1,23 \quad AB$$

3. karınca

$$(1-0,1)\times 1 + 1/1 = 1,9 \quad CD$$
$$(1-0,1)\times 1 + 1/5 = 1,1 \quad DB$$
$$(1-0,1)\times 1 + 1/3 = 1,23 \quad BA$$
$$(1-0,1)\times 1 + 1/6 = 1,06 \quad AC$$

$\rightarrow$ en iyi yol

4. karınca

$$(1-0,1)\times 1 + 1/2 \quad AD$$
$$(1-0,1)\times 1 + 1/6 \quad AC$$
$$(1-0,1)\times 1 + 1/4 \quad CB$$
$$(1-0,1)\times 1 + 1/5 \quad BD$$

Ayırt Seçimi

AB = 1,23
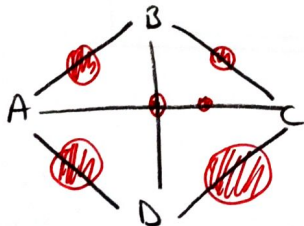BC = 1,15
CD = 1,9 $\rightarrow$ güncel fer. miz.
DA = 1,7
AC = 1,06
BD = 1,1

$$AB = \frac{(1,23)^1 \times (1/3)^{1,5}}{3.02} = 0,07$$

$$BC = \frac{(1,15)^1 \times (1/4)^{1,5}}{3.02} = 0,04$$

$$DA = \frac{(1,7)^1 \times (1/2)^{1,5}}{3.02} = 0,19$$

$$AC = \frac{(1,06)^1 \times (1/6)^{1,5}}{3.02} = 0,02$$

feromon oranları

$$CD > DA > AB > BC > BD > AC$$