```
Clear All;
"Za prvu oblast vazi: Δφ1=-ρ/ε0 odnosno 1/r d/dr (r dφ/dr)=-ρ/ε0";
"Za drugu oblast vazi: Δφ2=0 odnosno 1/r d/dr (r dφ/dr)=0";
"Rjesavanjem dobijamo:";
"φ1=-ρ/(4*ε0)*r^2+C1*ln(r)+C2=φ0 (na osnovu gr. uslovaza prvu oblast)";
"φ2=C3*ln(r)+C4 (na osnovu gr. uslova za drugu oblast)";
"Takodje vazi: D1n=D2n odnosno ε1E1=ε2E2 tj. ε1(-gradφ1)=ε2(-gradφ2);";
"Na granici dvije oblasti vazi φ1(b)=φ2(b).";
"Na osnovu ovih jednacina dobijamo:";

Rez = Flatten[Solve[{φ0 == -ρ/(4*ε1)*a^2 + C1*Log[a] + C2, 0 == C3*Log[c] + C4,
    -ρ/(4*ε1)*b^2 + C1*Log[b] + C2 == C3*Log[b] + C4, (-ρ/2*b + ε1*C1/b) == ε2*C3/b},
   {C1, C2, C3, C4}]];

Print["C1= ", FullSimplify[Together[C1 /. Rez]]]
Print["C2= ", FullSimplify[Together[C2 /. Rez]]]
Print["C3= ", FullSimplify[Together[C3 /. Rez]]]
Print["C4= ", FullSimplify[Together[C4 /. Rez]]]
```

$$C1= \frac{\varepsilon 2\,((a-b)\,(a+b)\,\rho+4\,\varepsilon 1\,\varphi 0)+2\,b^2\,\varepsilon 1\,\rho\,(\text{Log}[b]-\text{Log}[c])}{4\,\varepsilon 1\,(\varepsilon 2\,\text{Log}[a]+(\varepsilon 1-\varepsilon 2)\,\text{Log}[b]-\varepsilon 1\,\text{Log}[c])}$$

$$C2= \frac{(a^2\,\rho+4\,\varepsilon 1\,\varphi 0)\,((\varepsilon 1-\varepsilon 2)\,\text{Log}[b]-\varepsilon 1\,\text{Log}[c])+b^2\,\rho\,\text{Log}[a]\,(\varepsilon 2-2\,\varepsilon 1\,\text{Log}[b]+2\,\varepsilon 1\,\text{Log}[c])}{4\,\varepsilon 1\,(\varepsilon 2\,\text{Log}[a]+(\varepsilon 1-\varepsilon 2)\,\text{Log}[b]-\varepsilon 1\,\text{Log}[c])}$$

$$C3= \frac{(a-b)\,(a+b)\,\rho+4\,\varepsilon 1\,\varphi 0+2\,b^2\,\rho\,(-\text{Log}[a]+\text{Log}[b])}{4\,(\varepsilon 2\,\text{Log}[a]+(\varepsilon 1-\varepsilon 2)\,\text{Log}[b]-\varepsilon 1\,\text{Log}[c])}$$

$$C4= -\frac{((a-b)\,(a+b)\,\rho+4\,\varepsilon 1\,\varphi 0+2\,b^2\,\rho\,(-\text{Log}[a]+\text{Log}[b]))\,\text{Log}[c]}{4\,(\varepsilon 2\,\text{Log}[a]+(\varepsilon 1-\varepsilon 2)\,\text{Log}[b]-\varepsilon 1\,\text{Log}[c])}$$