In[2]:=
```
ord = 2
```
Out[2]= 2

In[3]:=
```
left = Sort[Join[{{0, DC}}, Table[{-k dx, VL[k]}, {k, 1, ord}]]]
```
Out[3]= {{0, DC}, {-2 dx, VL[2]}, {-dx, VL[1]}}

In[4]:=
```
right = Join[{{0, DC}}, Table[{k dx, VR[k]}, {k, 1, ord}]]
```
Out[4]= {{0, DC}, {dx, VR[1]}, {2 dx, VR[2]}}

In[5]:=
```
poL = Simplify[InterpolatingPolynomial[left, x]]
```
Out[5]= $$\frac{DC\left(2\,dx^2+3\,dx\,x+x^2\right)+x\,(dx\,(-4\,VL[1]+VL[2])+x\,(-2\,VL[1]+VL[2]))}{2\,dx^2}$$

In[6]:=
```
poR = Simplify[InterpolatingPolynomial[right, x]]
```
Out[6]= $$\frac{DC\left(2\,dx^2-3\,dx\,x+x^2\right)+x\,(4\,dx\,VR[1]-2\,x\,VR[1]-dx\,VR[2]+x\,VR[2])}{2\,dx^2}$$

In[7]:=
```
deL = Simplify[D[poL, x] /. x → 0]
```
Out[7]= $$\frac{3\,DC-4\,VL[1]+VL[2]}{2\,dx}$$

In[8]:=
```
deR = Simplify[D[poR, x] /. x → 0]
```
Out[8]= $$-\frac{3\,DC-4\,VR[1]+VR[2]}{2\,dx}$$

In[9]:=
```
solD = Simplify[Solve[deL / eL - deR / eR == 0, DC][[1, -1, -1]]]
```
Out[9]= $$-\frac{eR\,(-4\,VL[1]+VL[2])+eL\,(-4\,VR[1]+VR[2])}{3\,(eL+eR)}$$

In[10]:=
```
solE = Simplify[Solve[deL - deR == 0, DC][[1, -1, -1]]]
```
Out[10]= $$\frac{1}{6}\,(4\,VL[1]-VL[2]+4\,VR[1]-VR[2])$$

In[11]:=
```
lapL = Simplify[(D[poL, {x, 2}]) /. x → -dx]
```
Out[11]= $$\frac{DC-2\,VL[1]+VL[2]}{dx^2}$$

In[12]:=
```
lapR = Simplify[D[poR, {x, 2}] /. x → +dx]
```
Out[12]= $$\frac{DC-2\,VR[1]+VR[2]}{dx^2}$$

In[13]:=
```
Simplify[Apart[lapR /. DC → solD]]
```
Out[13]= $$\frac{2\,eL\,(-VR[1]+VR[2])+eR\,(4\,VL[1]-VL[2]-6\,VR[1]+3\,VR[2])}{3\,dx^2\,(eL+eR)}$$

In[14]:=
```
Simplify[Apart[lapL /. DC → solD]]
```

Out[14]=
$$\frac{2\,eR\,(-VL[1]+VL[2])-eL\,(6\,VL[1]-3\,VL[2]-4\,VR[1]+VR[2])}{3\,dx^2\,(eL+eR)}$$