# Region Plots final

```
In[52]:= lineStyle = {Thick, Black, Dashed};
line1 = Line[{{0.5, 0}, {0.5, 1}}];
```

## SD alone

```
RegionPlot[
In[46]:=
       {Pcc[x] > Pcn[x] > Pnc[x, e] > Pnn[e],}
      Pcc[x] > Pnc[x, e] > Pcn[x] > Pnn[e],
      Pnc[x, e] > Pcc[x] > Pcn[x] > Pnn[e],
       Pnc[x, e] > Pcc[x] > Pnn[e] > Pcn[x],
      Pnc[x, e] > Pnn[e] > Pcc[x] > Pcn[x]
       },
      {e, 0, 1}, {x, 0, 1},
       FrameTicksStyle → Directive[Black, 12],
      MaxRecursion \rightarrow 8,
       PlotPoints \rightarrow {Automatic, {{1.6, 0}}},
      (*PlotLegends → "Expressions",*)
       BoundaryStyle → Black,
       PlotStyle → {
      ColorData["HTML", "RoyalBlue"],
       ColorData["HTML", "CornflowerBlue"],
      ColorData["HTML", "Gold"],
      ColorData["HTML", "DarkOrange"],
      ColorData["HTML", "Firebrick"]},
      Epilog → {Directive[lineStyle], line1}
      ]
       1.0
      8.0
      0.6
Out[46]=
      0.4
       0.2
       0.0
         0.0
                   0.2
                             0.4
                                       0.6
                                                8.0
                                                          1.0
      ColorData["HTML", "ColorRules"]
In[33]:=
      ColorData["HTML", "CornflowerBlue"]
In[30]:=
```

Out[30]=

## SD alone + IP

```
In[47]:= Pnn[e_] := -1;

In[48]:= Pnc[x_, e_] := -1 × (1 - x) - e x;

In[49]:= Pcn[x_] := -0.5 - 1 × (1 - x);

In[50]:= Pcc[x_] := -0.5 × (1 - (1 - x)^2) - 1(1 - x)^2;
```

```
RegionPlot[
In[54]:=
       \{Pcc[x] > Pcn[x] > Pnc[x, e] > Pnn[e],
      Pcc[x] > Pnc[x, e] > Pcn[x] > Pnn[e],
      Pcc[x] > Pnc[x, e] > Pnn[e] > Pcn[x],
       Pnc[x, e] > Pcc[x] > Pcn[x] > Pnn[e],
      Pnc[x, e] > Pcc[x] > Pnn[e] > Pcn[x]
       },
      {e, 0, 1}, {x, 0, 1},
       FrameTicksStyle → Directive[Black, 12],
      MaxRecursion \rightarrow 8,
       PlotPoints \rightarrow {Automatic, {{1.6, 0}}},
      (*PlotLegends → "Expressions",*)
       BoundaryStyle → Black,
       PlotStyle → {
      ColorData["HTML", "RoyalBlue"],
      ColorData["HTML", "CornflowerBlue"],
      ColorData["HTML", "ForestGreen"],
      ColorData["HTML", "Gold"],
      ColorData["HTML", "DarkOrange"]},
      Epilog → {Directive[lineStyle], line1}
      ]
       1.0
      8.0
      0.6
Out[54]=
      0.4
       0.2
       0.0
         0.0
                   0.2
                             0.4
                                       0.6
                                                8.0
                                                          1.0
```

#### TTI alone

```
In[25]:= Pnn[e_] := -1-e;
```

```
ln[26]:= Pnc[x_, e_] := -1 × (1 - x) - e;
```

In[27]:= 
$$Pcn[x_] := -1 - 0.5;$$

In[28]:= 
$$Pcc[x_] := -1 \times (1 - x) - 0.5;$$

```
RegionPlot[
In[33]:=
        Pcc[x] > Pcn[x] > Pnc[x, e] > Pnn[e],
        Pcc[x] > Pnc[x, e] > Pcn[x] > Pnn[e],
        Pnc[x, e] > Pcc[x] > Pnn[e] > Pcn[x],
        Pnc[x, e] > Pnn[e] > Pcc[x] > Pcn[x],
       },
      {e, 0, 1}, {x, 0, 1},
      FrameTicksStyle → Directive[Black, 12],
      MaxRecursion → 8,
      PlotPoints \rightarrow {Automatic, {{1.6, 0}}},
      (*PlotLegends → "Expressions",*)
       BoundaryStyle → Black,
      PlotStyle → {
      ColorData["HTML", "RoyalBlue"],
      ColorData["HTML", "CornflowerBlue"],
      ColorData["HTML", "DarkOrange"],
      ColorData["HTML", "Firebrick"]},
      Epilog → {Directive[{Thick, Gray, Dashed}], line1}
      1
      1.0
      8.0
      0.6
Out[33]=
      0.4
      0.2
       0.0
         0.0
                   0.2
                             0.4
                                      0.6
                                                8.0
                                                         1.0
```

### TTI alone + IP

```
Pnn[e_] := -1-e+e;
In[34]:=
       Pnc[x_{-}, e_{-}] := -1 \times (1 - x) - e x;
In[35]:=
       Pcn[x_{-}] := -1 - x + x;
In[36]:=
       Pcc[x_{-}] := -1 \times (1 - x) - 0.5 x;
In[37]:=
       RegionPlot[
In[38]:=
       Pcc[x] > Pnc[x, e] > Pcn[x],
       Pnc[x, e] > Pcc[x] > Pcn[x],
        },
       {e, 0, 1}, {x, 0, 1},
       FrameTicksStyle → Directive[Black, 12],
       MaxRecursion → 8,
       PlotPoints \rightarrow {Automatic, {{1.6, 0}}},
       (*PlotLegends → "Expressions",*)
       BoundaryStyle → Black,
       PlotStyle → {
       ColorData["HTML", "CornflowerBlue"],
       ColorData["HTML", "DarkOrange"]},
       Epilog → {Directive[{Thick, Gray, Dashed}], line1}
       ]
       1.0
       0.8
       0.6
Out[38]=
       0.4
       0.2
       0.0
                    0.2
                               0.4
          0.0
                                         0.6
                                                   8.0
                                                             1.0
```