In[19]:=
```
egyensulyKapja = alfa / (1 + 2 * alfa)
egyensulyAdja = Simplify[1 - egyensulyKapja]
Simplify[D[egyensulyKapja, alfa]]
Simplify[D[egyensulyAdja, alfa]]
egyensulyAdja /. alfa → 0.5
egyensulyKapja /. alfa → 0.5
Plot[egyensulyKapja, {alfa, 0, 1}];
Plot[egyensulyAdja, {alfa, 0, 1}];
Plot[{egyensulyAdja, egyensulyKapja}, {alfa, 0, 1},
 PlotLegends → {"adja", "kapja"},
 PlotLabel → "ultimatum bargaining
    game\negyensúly-pontokbeli kifizetési értékek\nváltozó alfa értékeknél",
 AxesLabel → {"alfa", "kifizetés"},
 Ticks → {{0.2, 0.4, 0.5, 0.6, 0.8, 1.0}, {0.1, 0.25, 0.4, 0.6, 0.8, 1.0}},
 GridLines → {{0.5}, {0.25, 0.75}}]
```

Out[19]= $\frac{\text{alfa}}{1 + 2\,\text{alfa}}$

Out[20]= $\frac{1 + \text{alfa}}{1 + 2\,\text{alfa}}$

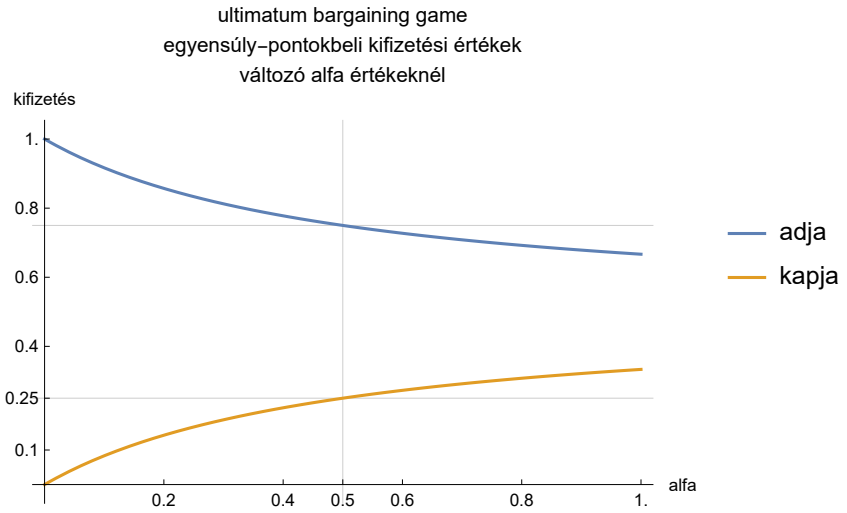
Out[21]= $\frac{1}{(1 + 2\,\text{alfa})^2}$

Out[22]= $-\frac{1}{(1 + 2\,\text{alfa})^2}$

Out[23]= 0.75

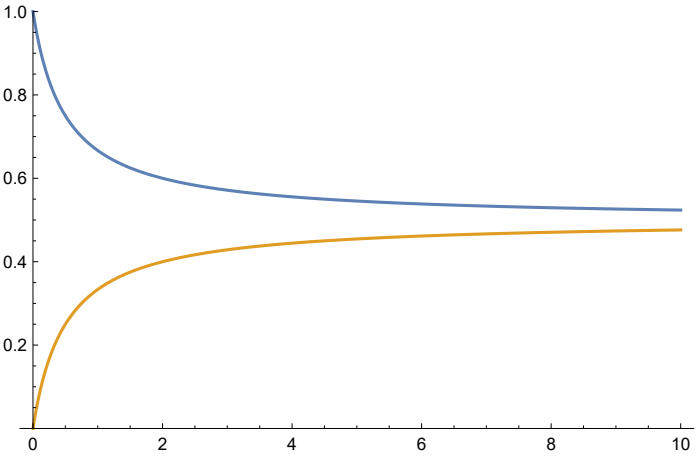
Out[24]= 0.25

Out[27]=



In[28]:=
```
Plot[{egyensulyAdja, egyensulyKapja}, {alfa, 0, 10}, PlotRange → {0, 1}]
```

Out[28]=



In[ ]:=
```
Solve[0 == m + a (2 * m - 1), m]
```

Out[ ]=
$$\left\{\left\{m \to \frac{a}{1+2\,a}\right\}\right\}$$

In[ ]:=
```
Solve[1 / 2 == m + a (2 * m - 1), m]
```

Out[ ]=
$$\left\{\left\{m \to \frac{1}{2}\right\}\right\}$$

In[ ]:=
```
alf = 1.2
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"adja", "kapja"},
 PlotLabel →
  "ultimatum bargaining game\nkifizetési értékek\nalfa = " <> ToString[alf],
 AxesLabel → {"ajánlat", "kifizetés"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[ ]= 1.2

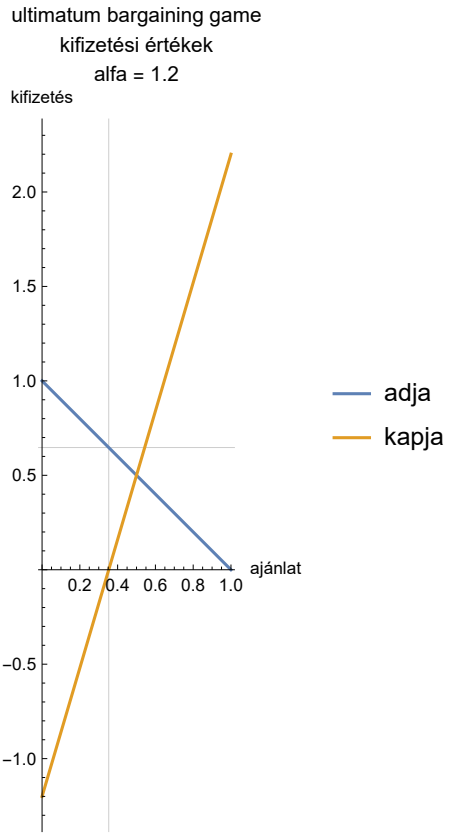
Out[ ]= $x + 1.2 \times (-1 + 2\,x)$

Out[ ]= 0.352941

Out[ ]= 0.647059

Out[ ]= 1 - x

Out[ ]=



In[•]:=
```
alf = 1.2
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"Proposer", "Responder"},
 PlotLabel → "alpha = " <> ToString[alf],
 AxesLabel → {"Offer", "Payoff"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[•]= 1.2

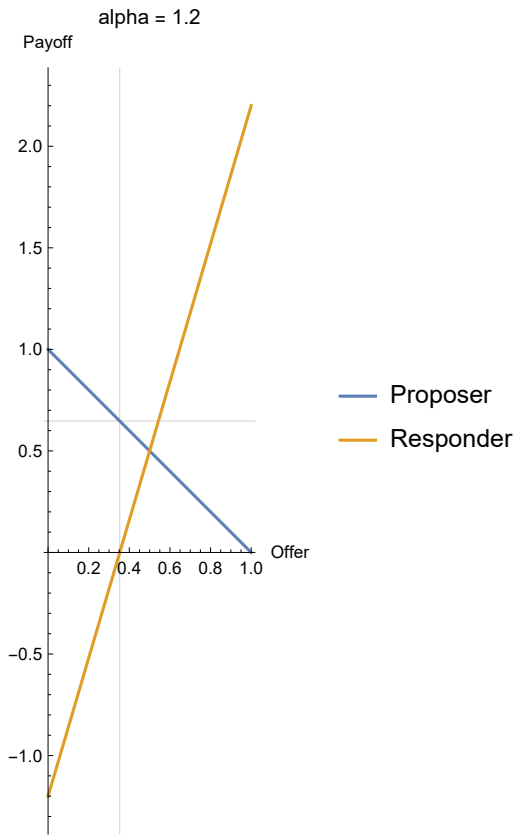
Out[•]= x + 1.2 × (−1 + 2 x)

Out[•]= 0.352941

Out[•]= 0.647059

Out[•]= 1 − x

Out[•]=



In[•]:=
```
alf = 0.3
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"Proposer", "Responder"},
 PlotLabel → "alpha = " <> ToString[alf],
 AxesLabel → {"Offer", "Payoff"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[•]= 0.3

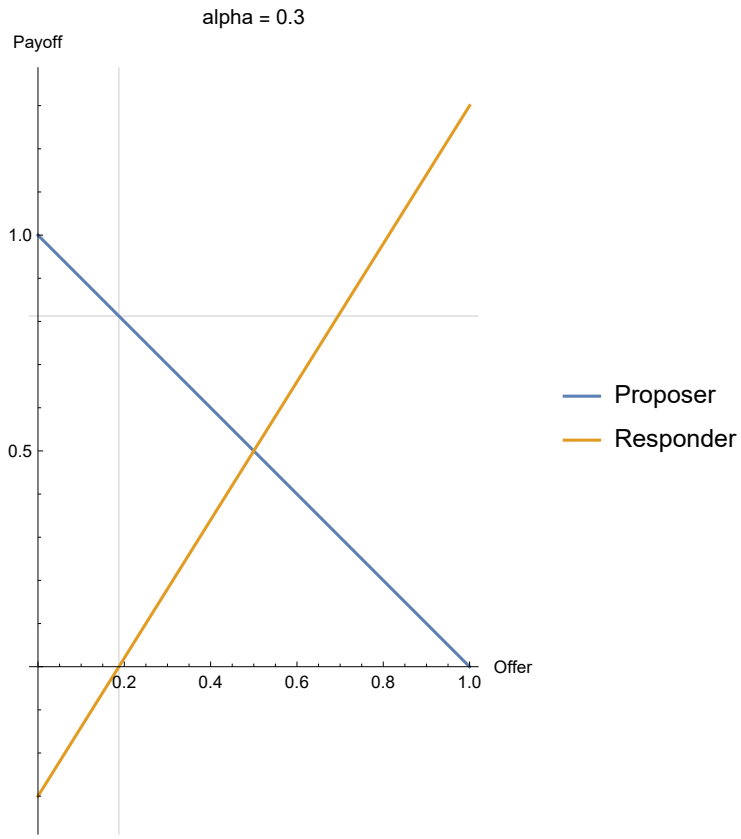
Out[•]= x + 0.3 × (-1 + 2 x)

Out[•]= 0.1875

Out[•]= 0.8125

Out[•]= 1 - x

Out[•]=



In[•]:=
```
alf = 0
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"Proposer", "Responder"},
 PlotLabel → "alpha = " <> ToString[alf],
 AxesLabel → {"Offer", "Payoff"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[•]= 0

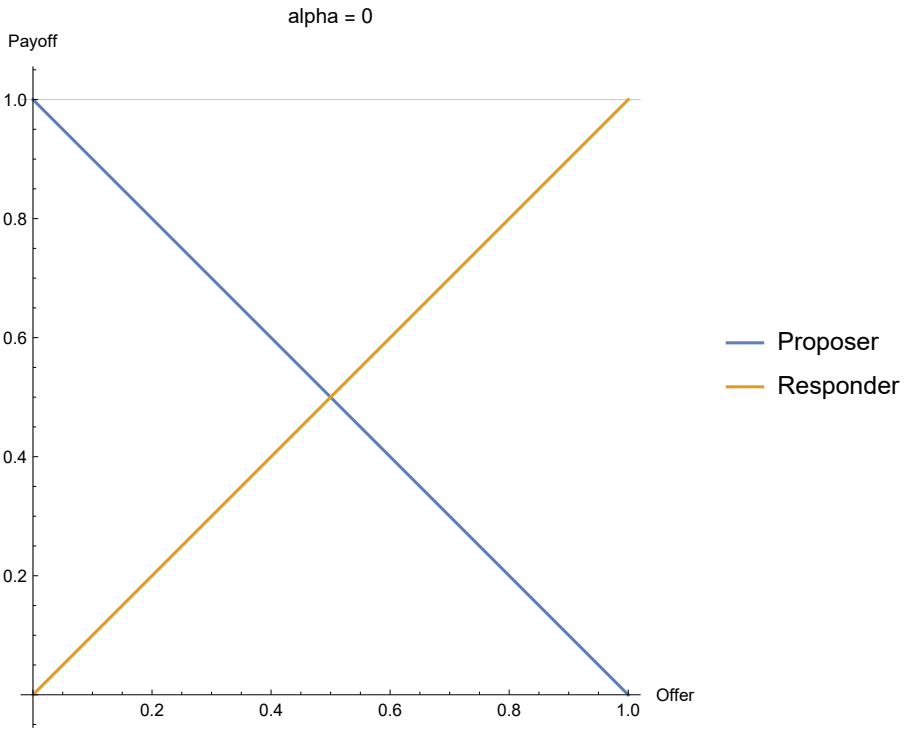
Out[•]= x

Out[•]= 0

Out[•]= 1

Out[•]= 1 - x

Out[•]=



In[ ]:=
```
alf = 0.3
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"adja", "kapja"},
 PlotLabel →
  "ultimatum bargaining game\nkifizetési értékek\nalfa = " <> ToString[alf],
 AxesLabel → {"ajánlat", "kifizetés"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[ ]= 0.3

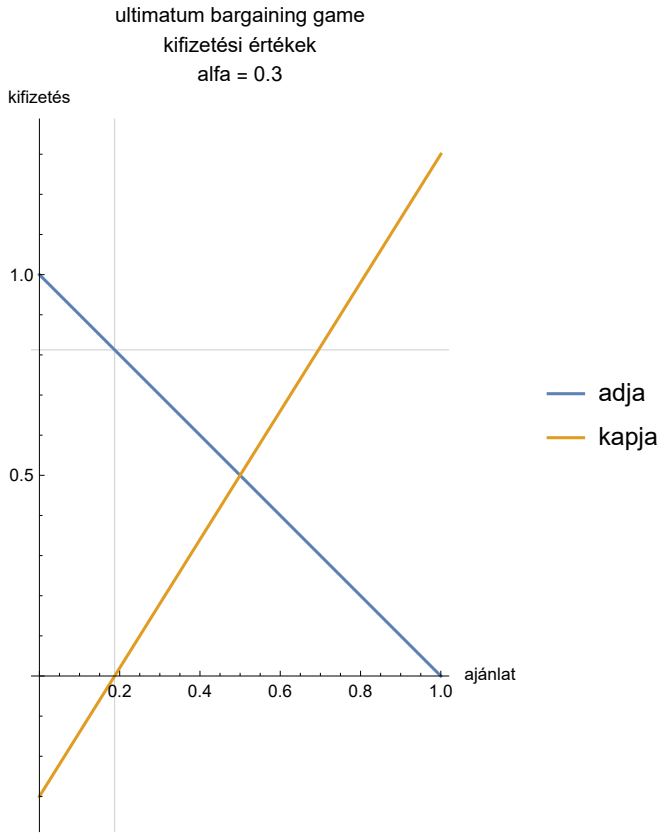
Out[ ]= x + 0.3 × (-1 + 2 x)

Out[ ]= 0.1875

Out[ ]= 0.8125

Out[ ]= 1 - x

Out[ ]=



In[ ]:=
```
alf = 0
Kapja = x + alf * (x - (1 - x))
pont = alf / (1 + 2 * alf)
1 - pont
Adja = 1 - x
Plot[Kapja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[Adja , {x, 0, 1}, AspectRatio → Automatic, PlotRange → All];
Plot[{Adja , Kapja }, {x, 0, 1},
 PlotLegends → {"adja", "kapja"},
 PlotLabel →
  "ultimatum bargaining game\nkifizetési értékek\nalfa = " <> ToString[alf],
 AxesLabel → {"ajánlat", "kifizetés"},
 AspectRatio → Automatic,
 PlotRange → All,
 GridLines → {{pont}, {1 - pont}}]
```

Out[ ]= 0

Out[ ]= x

Out[ ]= 0

Out[ ]= 1

Out[ ]= 1 - x

Out[ ]=