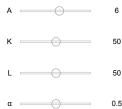
```
In [ ]: using Interact
using Gadfly

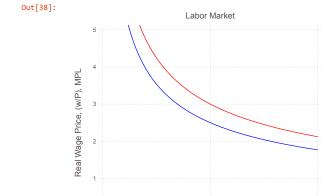
In [39]: set_default_plot_size(25cm, 12cm)
```

An Equilibrium Business-Cycle Model

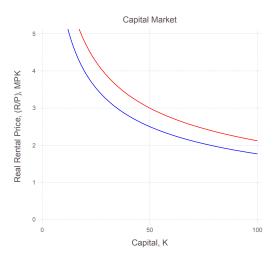
Key Equation \$\$ C + \Delta K \ = \ A \cdot F(K,L) - \delta K \$\$

```
In [4]: function MPK(A, K, L, \alpha)
return A*\alpha*K^{(\alpha-1)*L^{(1-\alpha)}}
 Out[4]: MPK (generic function with 2 methods)
In [11]: function MPL(A, K, L, \alpha)
              return A*(1-\alpha)*K^{\alpha}L^{(-\alpha)} end
Out[11]: MPL (generic function with 1 method)
for level in domain
   push!(dY_dL_fixed, MPL(5, 50, level, .5))
   push!(dY_dK_fixed, MPK(5, level, 50, .5))
              @manipulate for A in 1:10, K in 0:5:100, L in 0:5:100, \alpha in 0:.1:1
                    # Labor Market
dY_dL = []
                    for level_L in domain push!(dY_dL, MPL(A, K, level_L, \alpha)) end
                    labor_market = plot(
                          layer(x=domain, y=dY_dL_fixed, Geom.line, Theme(default_color=colorant"blue")),
layer(x=domain, y=dY_dL, Geom.line, Theme(default_color=colorant"red")),
                          Coord.Cartesian(xmin=0,xmax=100,ymin=0,ymax=5),
                          Guide.Title("Labor Market"),
Guide.xlabel("Labor, L"),
Guide.ylabel("Real Wage Price, (w/P), MPL")
                    # Capital Market
                    dY_dK = []
                    for level_K in domain push!(dY_dK, MPK(A, level_K, L, \alpha)) end
                          ldar_market = poc(
layer(x=domain, y=dY_dK_fixed, Geom.line, Theme(default_color=colorant"blue")),
layer(x=domain, y=dY_dK, Geom.line, Theme(default_color=colorant"red")),
                          Coord.Cartesian(xmin=0,xmax=100,ymin=0,ymax=5),
Guide.Title("Capital Market"),
Guide.xlabel("Capital, K"),
Guide.ylabel("Real Rental Price, (R/P), MPK")
                    hstack(labor_market, capital_market)
```





Labor, L



0