In[1]:=
```
5 + 5
```

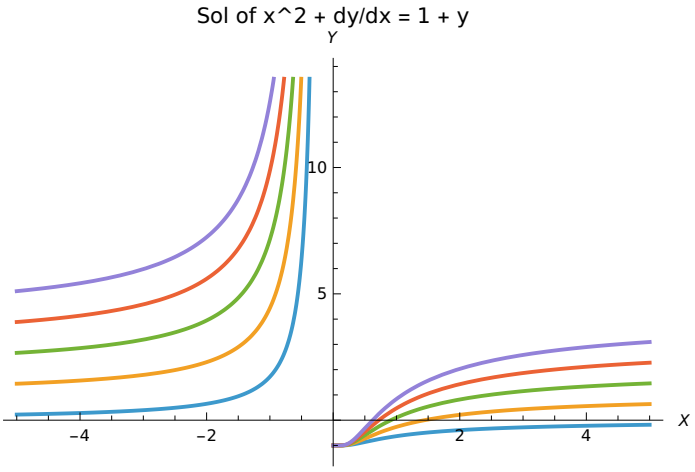
Out[1]=
```
10
```

In[86]:=
```
sol = DSolve[x^2 * y'[x] == 1 + y[x], y[x], x]
tab = Table[y[x] /. sol /. {C[1] → k}, {k, 1, 5}]
Plot[Evaluate[tab], {x, -5, 5}, PlotStyle → Thick,
 AxesLabel → {X, Y}, PlotLabel → "Sol of x^2 + dy/dx = 1 + y"]
```

Out[86]=
$$\{\{y[x] \to -1 + e^{-1/x} c_1\}\}$$

Out[87]=
$$\{\{-1 + e^{-1/x}\}, \{-1 + 2\, e^{-1/x}\}, \{-1 + 3\, e^{-1/x}\}, \{-1 + 4\, e^{-1/x}\}, \{-1 + 5\, e^{-1/x}\}\}$$

Out[88]=



In[24]:=
```
sol = DSolve[y'[x] - x^2 == 0, y[x], x]
tab = Table[y[x] /. sol /. {C[1] → k}, {k, 1, 5}]
Plot[Evaluate[tab], {x, -1, 1}, PlotStyle → Thick,
 AxesLabel → {X, Y}, PlotLabel → "Sol of dy/dx = x^2"]
```

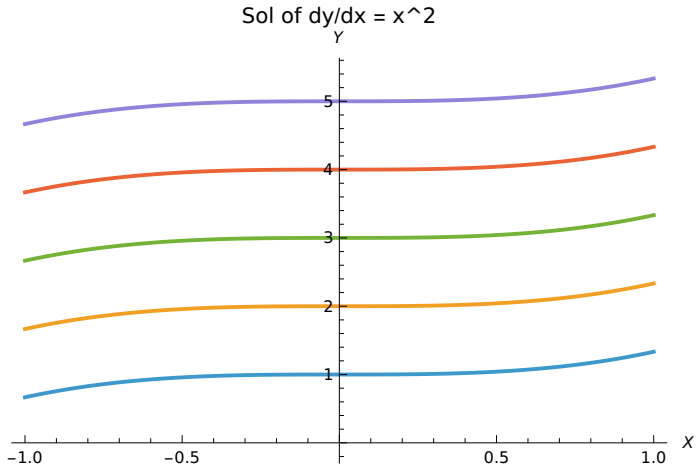
Out[24]=

$$\left\{\left\{y[x] \to \frac{x^3}{3} + c_1\right\}\right\}$$

Out[25]=

$$\left\{\left\{1 + \frac{x^3}{3}\right\}, \left\{2 + \frac{x^3}{3}\right\}, \left\{3 + \frac{x^3}{3}\right\}, \left\{4 + \frac{x^3}{3}\right\}, \left\{5 + \frac{x^3}{3}\right\}\right\}$$

Out[26]=



In[90]:=
```
ClearAll
```

Out[90]=

```
ClearAll
```

In[106]:=
```
sol = DSolve[y'[x] + (x * y[x]^2 + x) / (y[x] * x^2 + y[x]) == 0, y[x], x]
```

Out[106]=

$$\left\{\left\{y[x] \to -\frac{\sqrt{-1 + e^{2c_1} - x^2}}{\sqrt{1 + x^2}}\right\}, \left\{y[x] \to \frac{\sqrt{-1 + e^{2c_1} - x^2}}{\sqrt{1 + x^2}}\right\}\right\}$$

In[107]:=
```
tab = Table[y[x] /. sol /. {C[1] → k}, {k, 1, 5}]
```

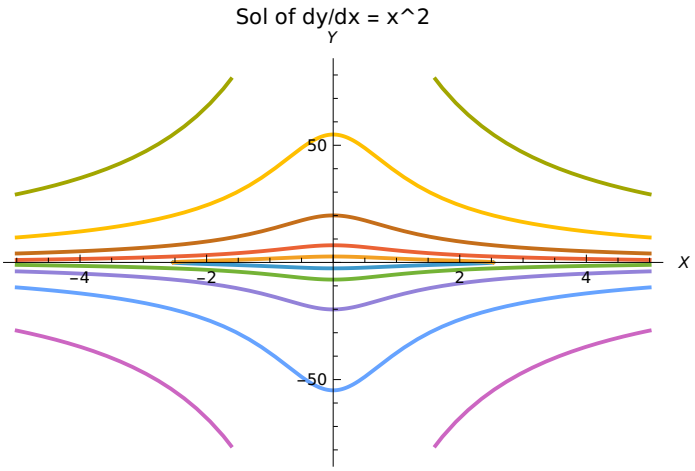
Out[107]=

$$\left\{\left\{-\frac{\sqrt{-1 + e^2 - x^2}}{\sqrt{1 + x^2}}, \frac{\sqrt{-1 + e^2 - x^2}}{\sqrt{1 + x^2}}\right\}, \left\{-\frac{\sqrt{-1 + e^4 - x^2}}{\sqrt{1 + x^2}}, \frac{\sqrt{-1 + e^4 - x^2}}{\sqrt{1 + x^2}}\right\},\right.$$
$$\left.\left\{-\frac{\sqrt{-1 + e^6 - x^2}}{\sqrt{1 + x^2}}, \frac{\sqrt{-1 + e^6 - x^2}}{\sqrt{1 + x^2}}\right\}, \left\{-\frac{\sqrt{-1 + e^8 - x^2}}{\sqrt{1 + x^2}}, \frac{\sqrt{-1 + e^8 - x^2}}{\sqrt{1 + x^2}}\right\}, \left\{-\frac{\sqrt{-1 + e^{10} - x^2}}{\sqrt{1 + x^2}}, \frac{\sqrt{-1 + e^{10} - x^2}}{\sqrt{1 + x^2}}\right\}\right\}$$

In[108]:=

```
Plot[Evaluate[tab], {x, -5, 5}, PlotStyle → Thick,
 AxesLabel → {X, Y}, PlotLabel → "Sol of dy/dx = x^2"]
```

Out[108]=



In[109]:=

```
ClearAll
```

Out[109]=

```
ClearAll
```

In[2]:=

In[4]:=

In[127]:=

In[128]:=

In[133]:=

In[132]:=

In[39]:=

In[129]:=

In[130]:=

In[131]:=

$Aborted