

In[17]:= **c = 1 - 2 I**
[虚]

Out[17]= $1 - 2 i$

In[18]:= **f[z_] := c z**

In[19]:= **ComplexExpand[f[x + I y]]**
[式の展開] [虚数単位]

Out[19]= $x + 2 y + i (-2 x + y)$

In[20]:= **phi[x_, y_] := ComplexExpand[Re[f[x + I y]]]**
[式の展開] [実部] [虚数単位]

In[21]:= **psi[x_, y_] := ComplexExpand[Im[f[x + I y]]]**
[式の展開] [複素数...] [虚数単位]

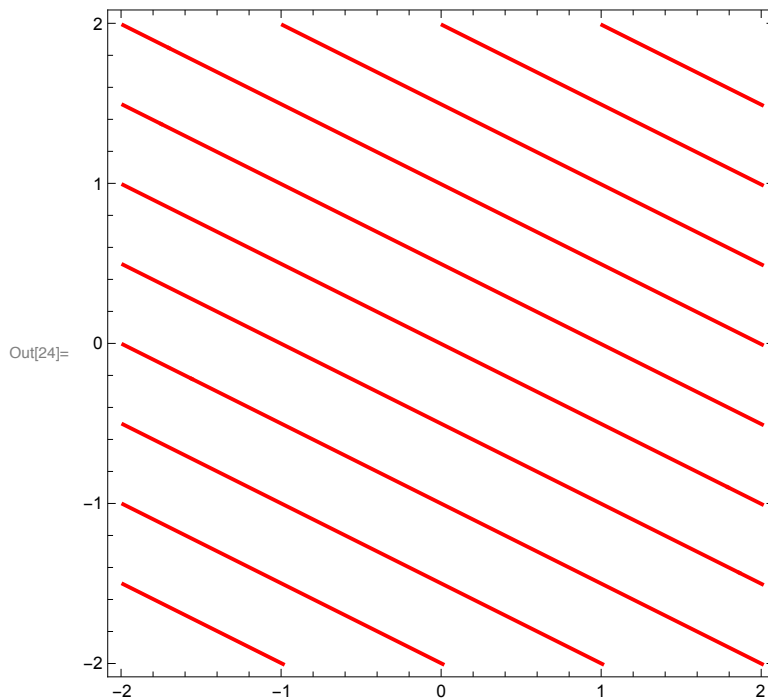
In[22]:= **phi[x, y]**

Out[22]= $x + 2 y$

In[23]:= **psi[x, y]**

Out[23]= $-2 x + y$

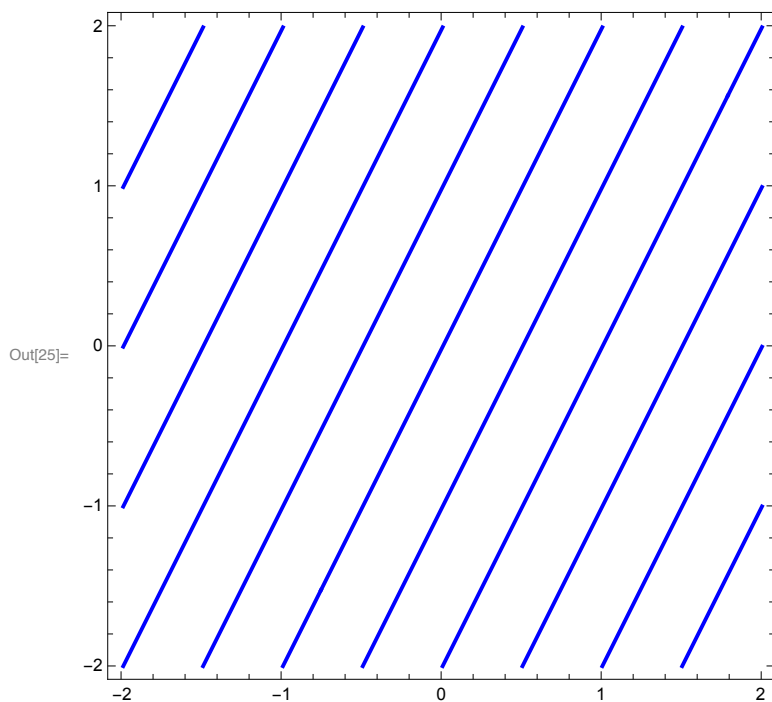
In[24]:= **g1 = ContourPlot[phi[x, y] == Table[c, {c, -5, 5, 1.0}],**
[等高線プロット] [リストを作成]
{x, -2, 2}, {y, -2, 2}, ContourStyle -> Directive[Red, Thick]]
[等高スタイル] [指示子] [赤] [太い]



```

In[25]:= g2 = ContourPlot[psi[x, y] == Table[c, {c, -5, 5, 1.0}],
    [等高線プロット] [リストを作成]
    {x, -2, 2}, {y, -2, 2}, ContourStyle -> Directive[Blue, Thick]
    [等高スタイル] [指示子] [青] [太い]

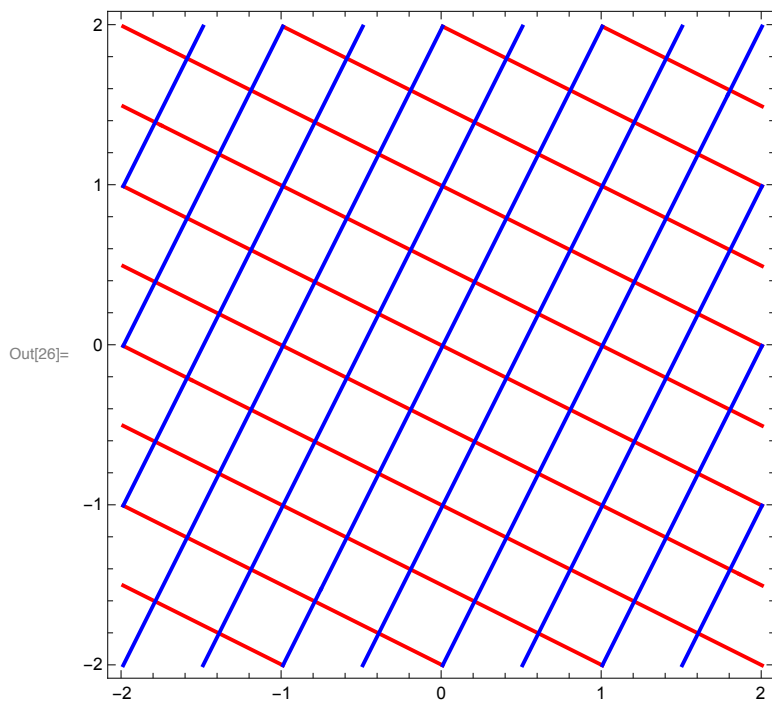
```



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In[26]:= Show[g1, g2]
    [示す]

```

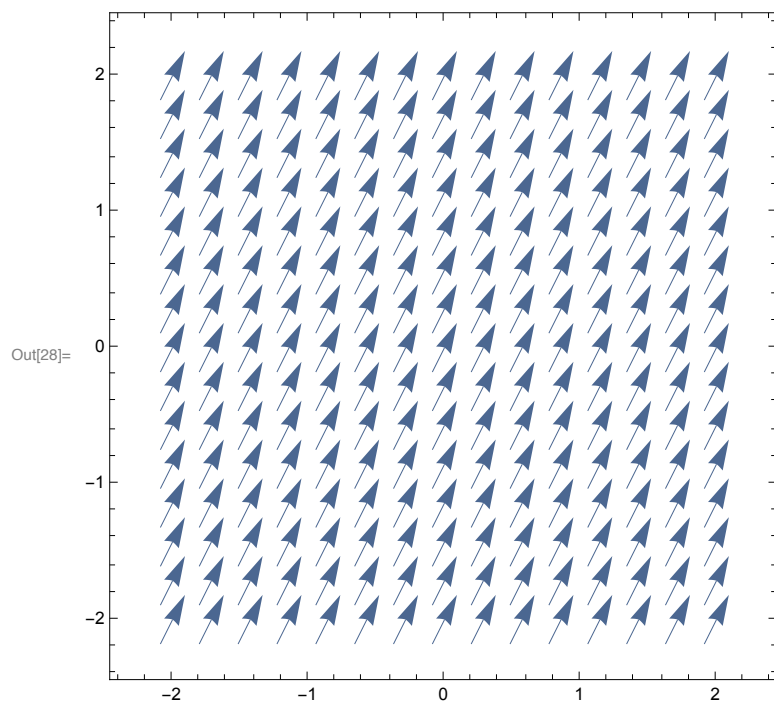


```

In[27]:= vv[x_, y_] := {Re[f'[x + I y]], -Im[f'[x + I y]]}
    [実部] [虚数単位] [複素数...] [虚数単位]

```

In[28]:= **g3 = VectorPlot**[**vv**[**x**, **y**], {**x**, -2, 2}, {**y**, -2, 2}]
 ベクトルプロット



In[29]:= **Show**[**g1**, **g2**, **g3**]
 示す

