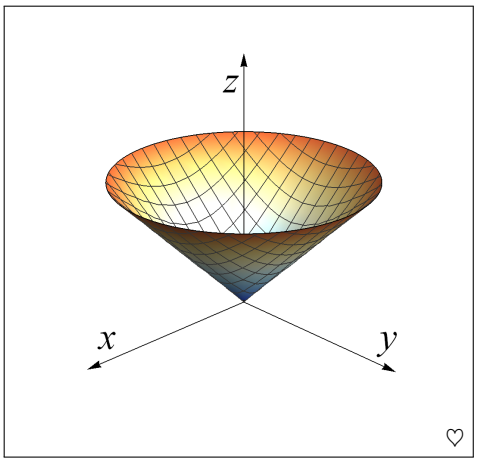
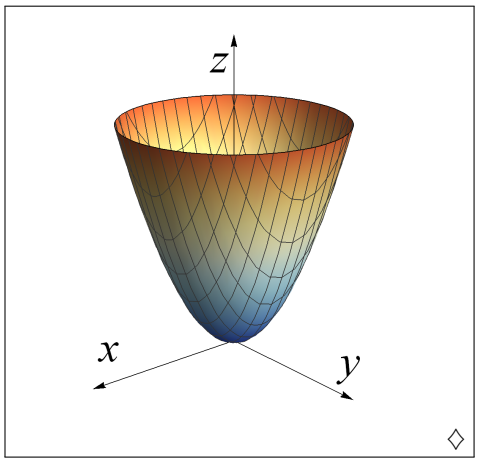
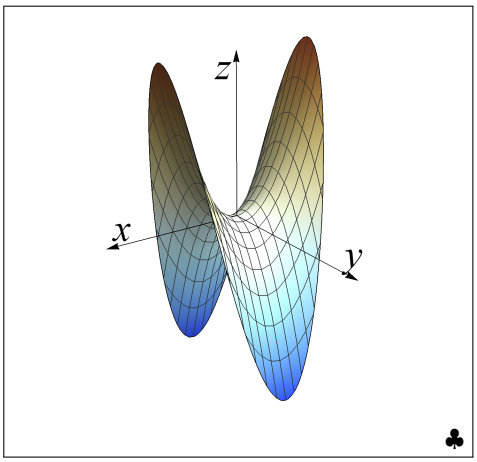


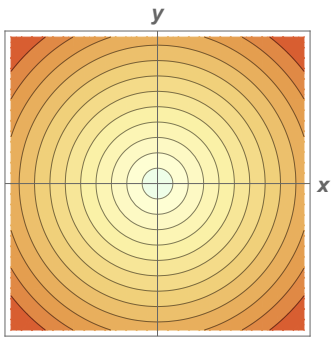
♡



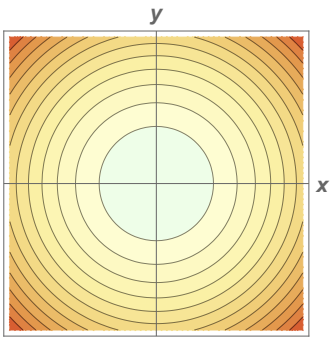
♢



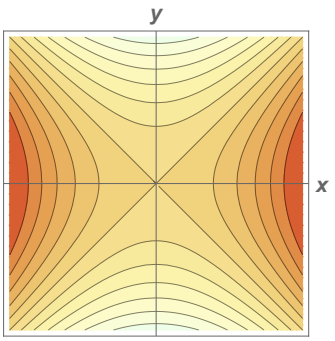
♣



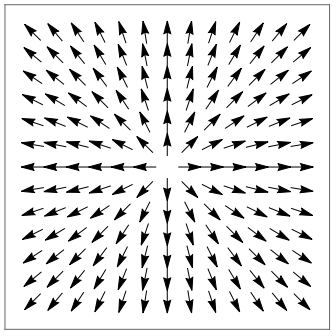
*A*

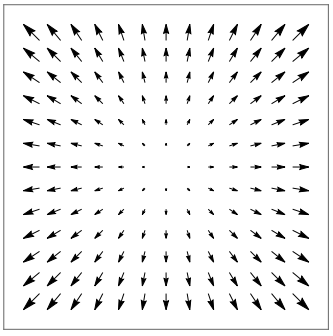


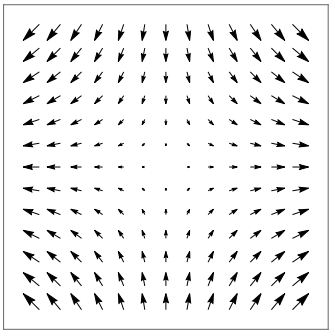
*B*



*C*


2


1


3

Potential function
$f(x,y) = \sqrt{x^2+y^2}$
c

Potential function
$f(x,y) = x^2 + y^2$
b

Potential function
$f(x,y) = x^2 - y^2$
a

Gradient vector field
$\mathbf{F}(x,y) = \nabla f = \left\langle \frac{x}{\sqrt{x^2+y^2}}, \frac{x}{\sqrt{x^2+y^2}} \right\rangle$
$\gamma$

Gradient vector field
$\mathbf{F}(x,y) = \nabla f = \langle 2x, 2y \rangle$
$\alpha$

Gradient vector field
$\mathbf{F}(x,y) = \nabla f = \langle 2x, -2y \rangle$
$\beta$