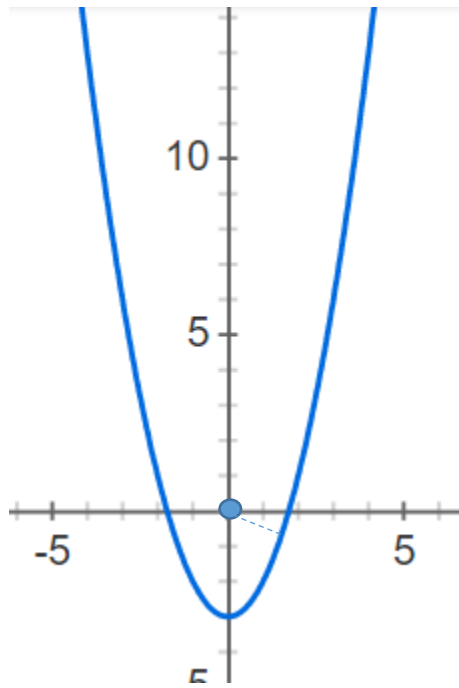
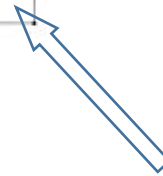
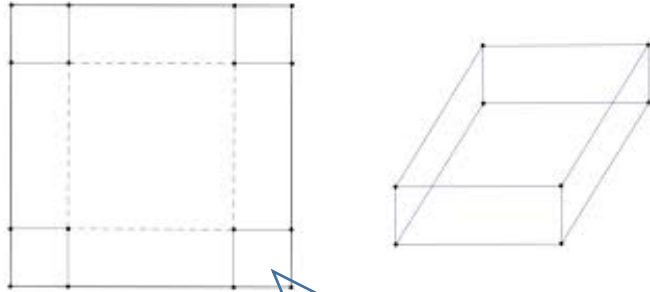


## Optimization Example Set#2:

1. Find the point on the parabola  $y = x^2 - 3$  closest to the point  $(0,0)$ .



2. A square sheet of cardboard measuring 18 x 18 inches is made into an open box (no top) by cutting squares of equal size out of each corner and folding up the sides along the dotted lines (see diagram). Find the dimensions of the box with the maximum volume.



*Cut out these corner squares and then fold up!*