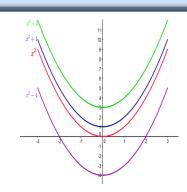
## **Review of Transformations**

Parent function 
$$f(x) = x^2$$
  
 $g(x) = a(x + h)^2 + c$ 

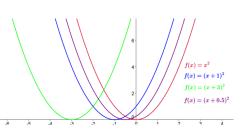
"c" is a vertical translation

upwards for c > 0 downwards for c < 0

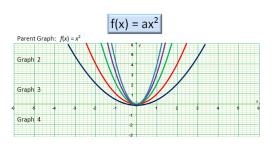


"h" is a horizontal translation

to the left for h > 0to the right for h < 0



"a" is a scaling with



0 < a < 1 making the graph wider

a > 1 making the graph narrower

a < 0 inverting the graph

