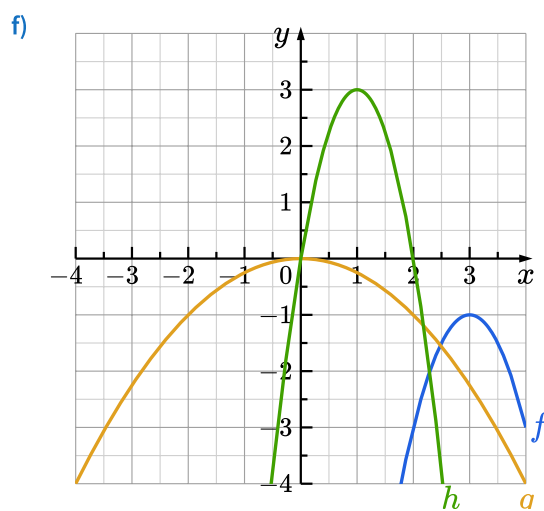
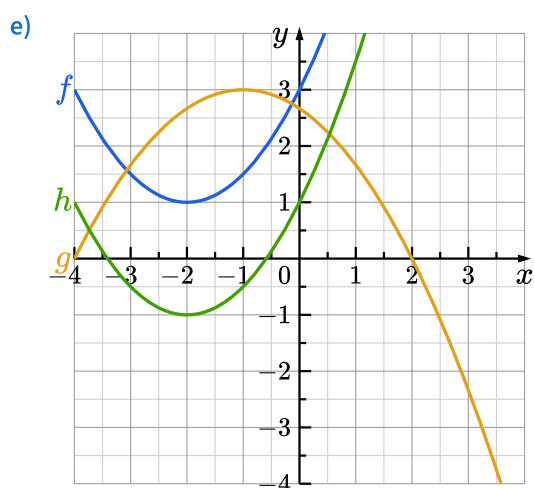
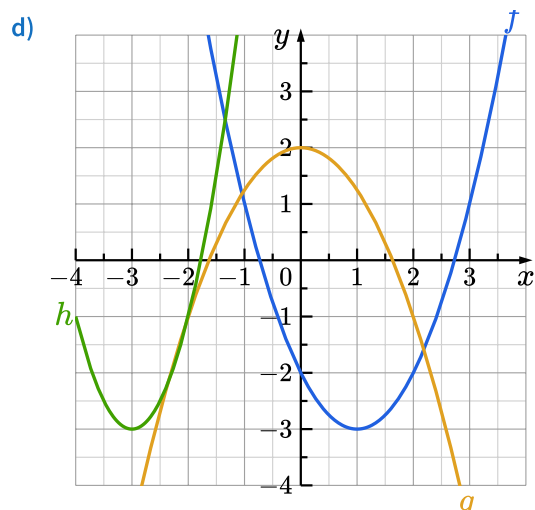
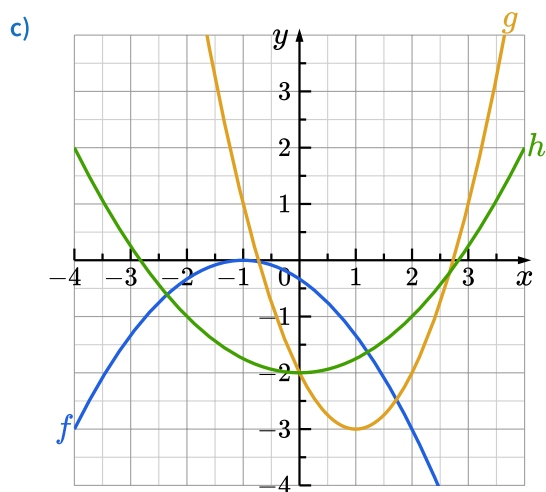
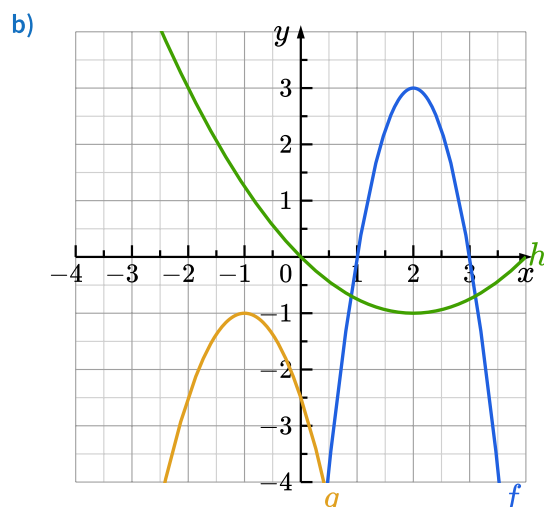
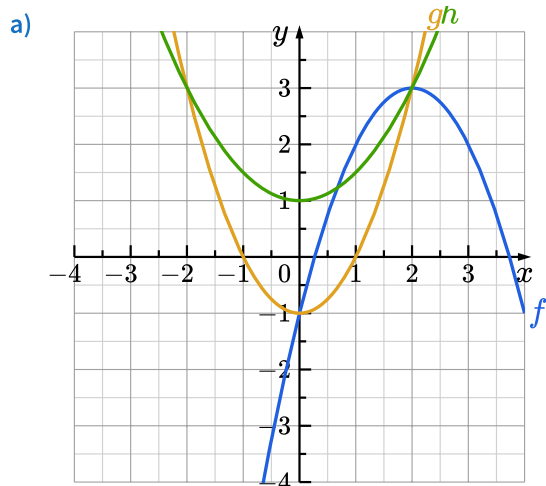
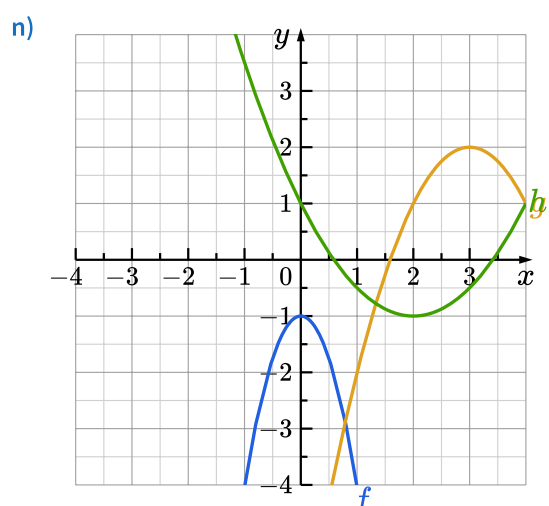
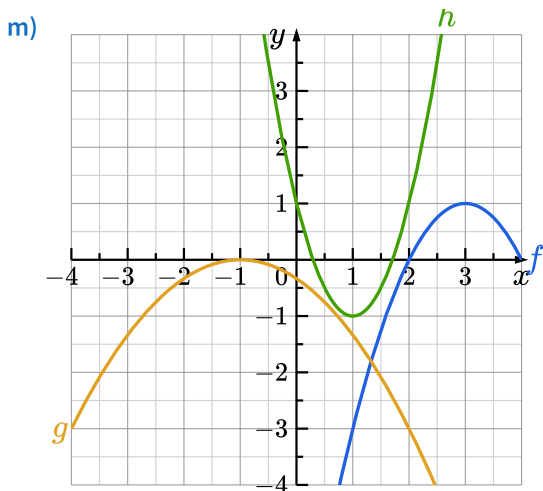
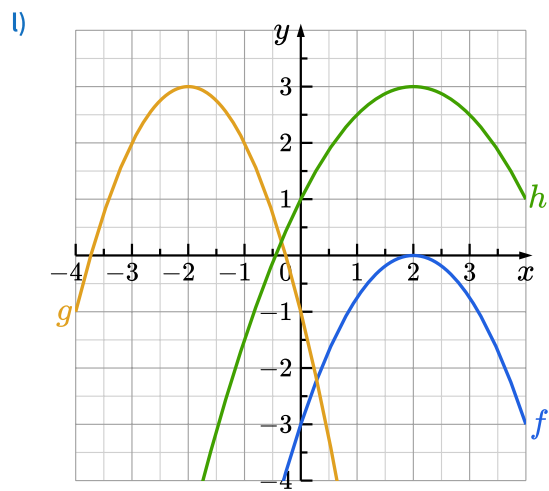
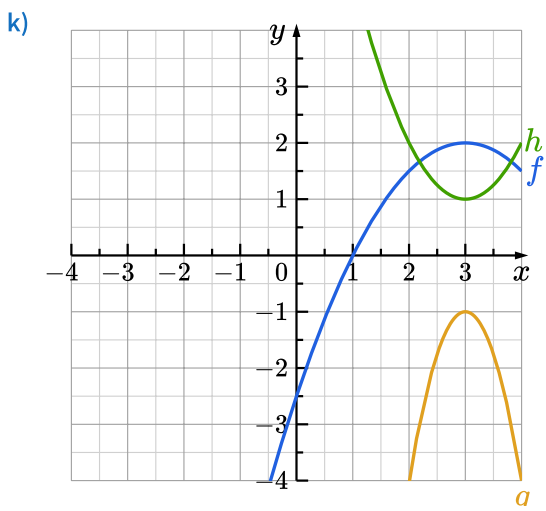
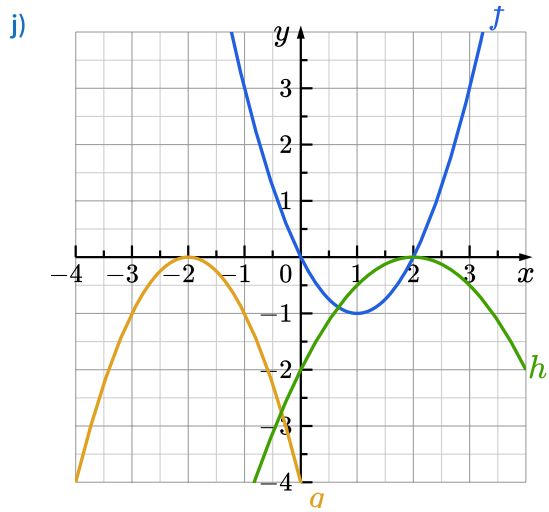
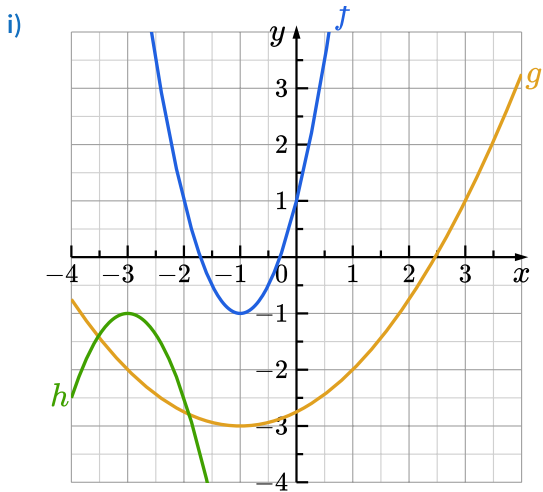
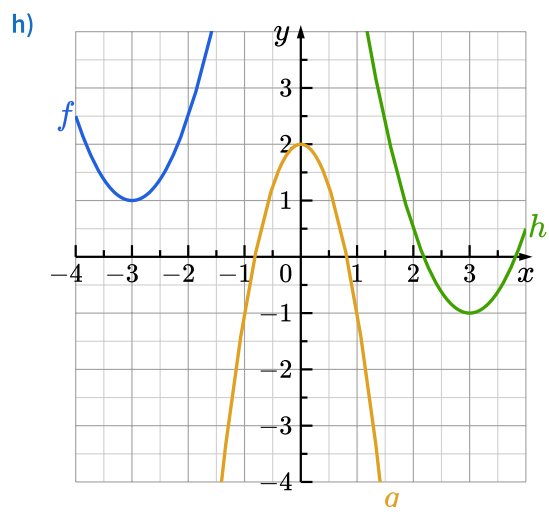
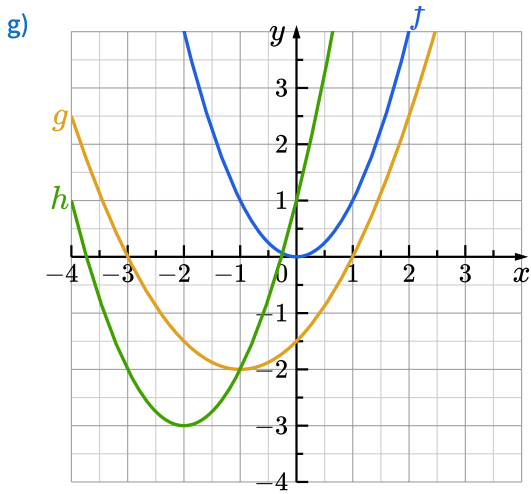


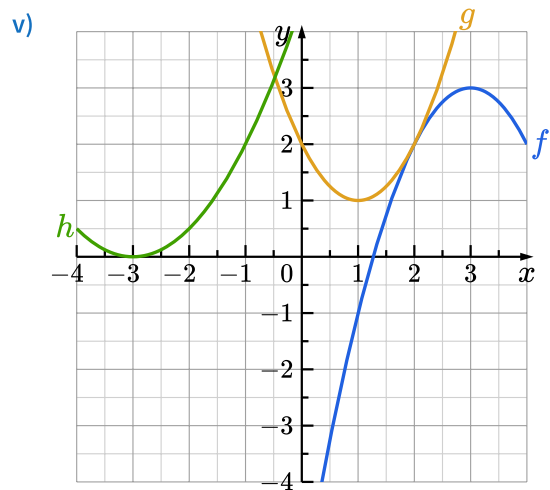
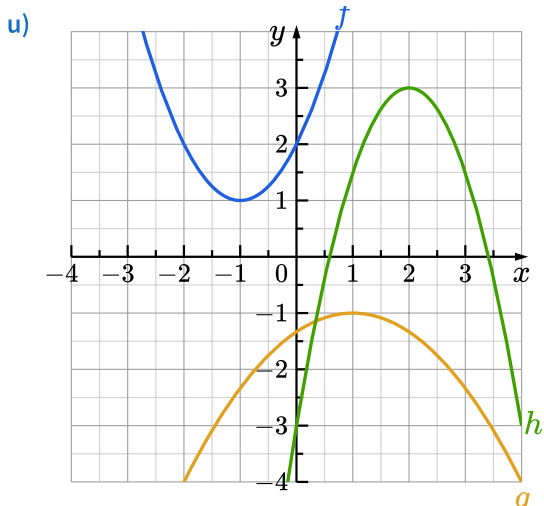
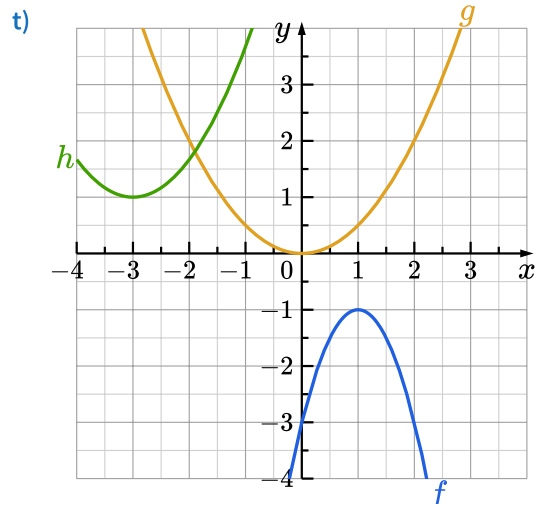
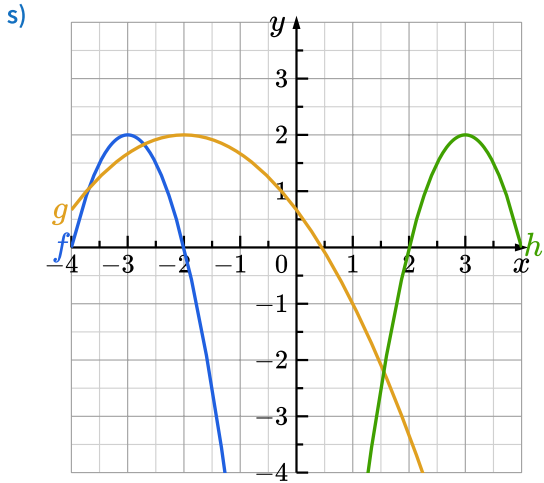
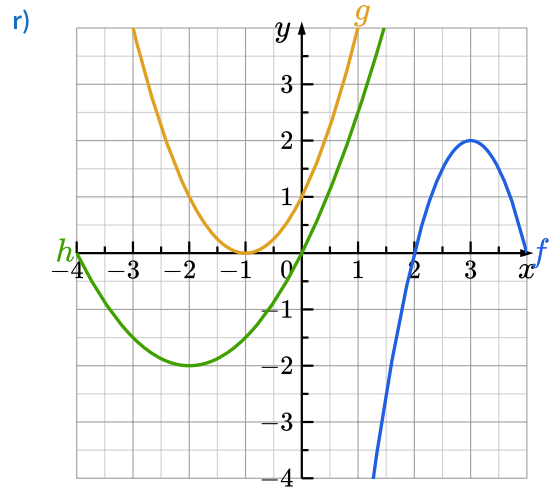
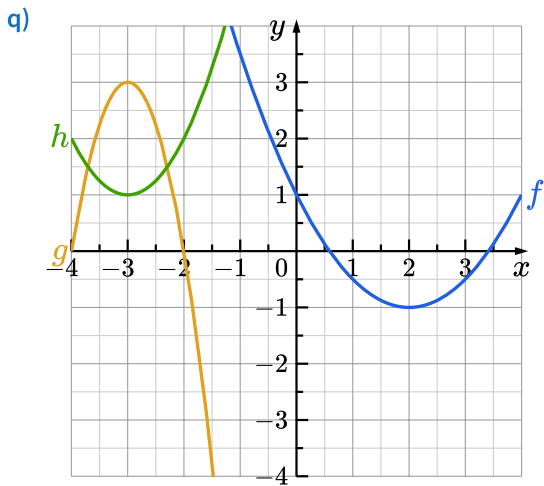
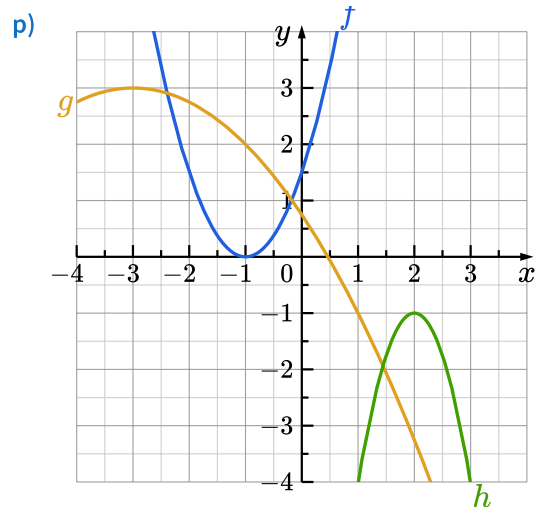
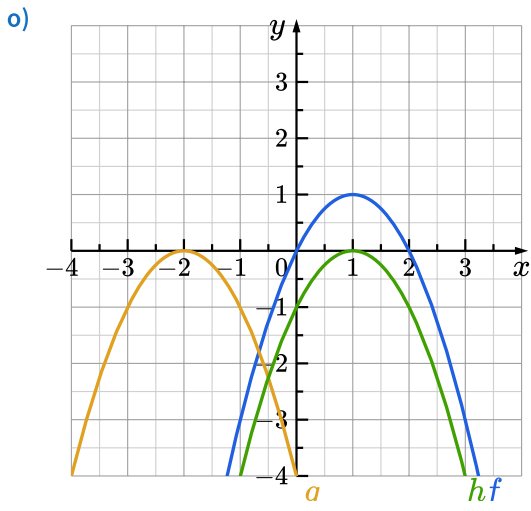
Aufstellen einer quadratische Funktionen

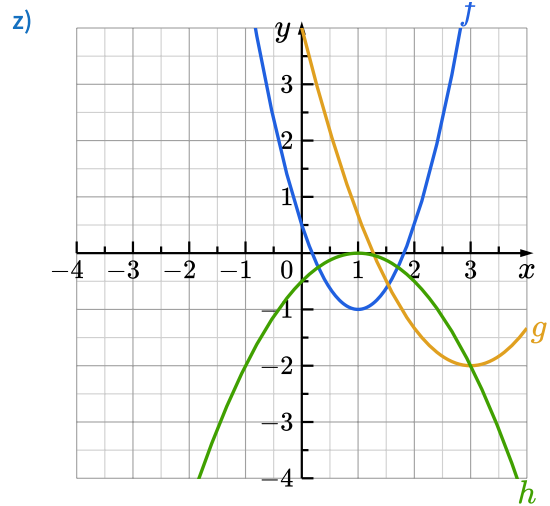
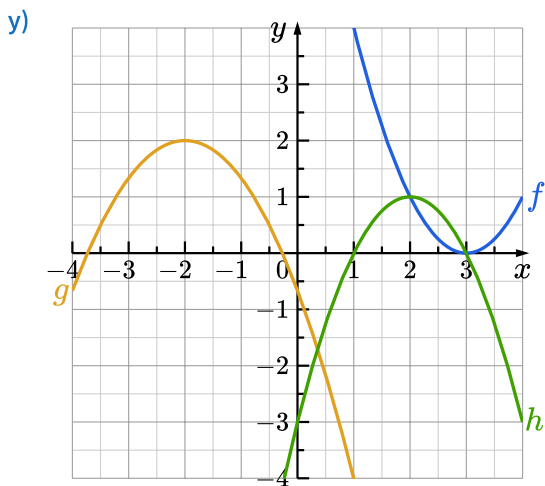
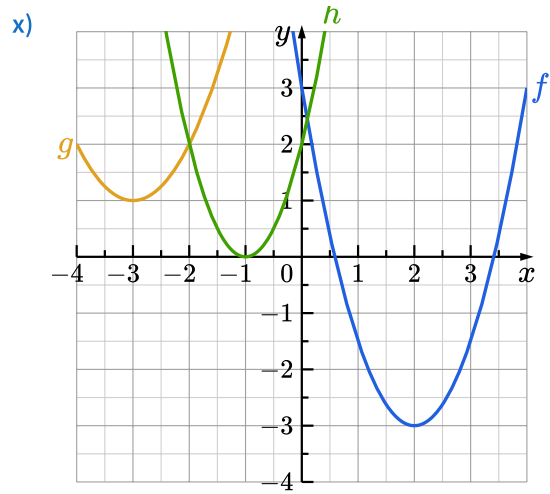
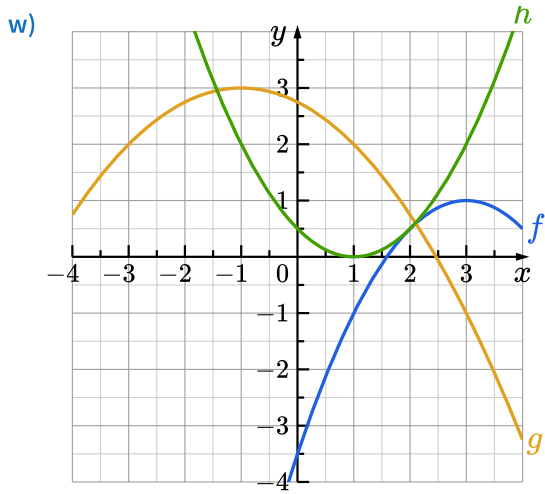
Aufgabe

Stellen Sie anhand des Graphen die Scheitelpunktsform der quadratischen Funktionen auf:









Lösung

a) $f(x) = -(x-2)^2 + 3$
 $g(x) = x^2 - 1$
 $h(x) = \frac{1}{2}x^2 + 1$

c) $f(x) = -\frac{1}{3}(x+1)^2$
 $g(x) = (x-1)^2 - 3$
 $h(x) = \frac{1}{4}x^2 - 2$

e) $f(x) = \frac{1}{2}(x+2)^2 + 1$
 $g(x) = -\frac{1}{3}(x+1)^2 + 3$
 $h(x) = \frac{1}{2}(x+2)^2 - 1$

g) $f(x) = x^2$
 $g(x) = \frac{1}{2}(x+1)^2 - 2$
 $h(x) = (x+2)^2 - 3$

i) $f(x) = 2(x+1)^2 - 1$
 $g(x) = \frac{1}{4}(x+1)^2 - 3$
 $h(x) = -\frac{3}{2}(x+3)^2 - 1$

k) $f(x) = -\frac{1}{2}(x-3)^2 + 2$
 $g(x) = -3(x-3)^2 - 1$
 $h(x) = (x-3)^2 + 1$

m) $f(x) = -(x-3)^2 + 1$
 $g(x) = -\frac{1}{3}(x+1)^2$
 $h(x) = 2(x-1)^2 - 1$

o) $f(x) = -(x-1)^2 + 1$
 $g(x) = -(x+2)^2$
 $h(x) = -(x-1)^2$

q) $f(x) = \frac{1}{2}(x-2)^2 - 1$
 $g(x) = -3(x+3)^2 + 3$
 $h(x) = (x+3)^2 + 1$

s) $f(x) = -2(x+3)^2 + 2$
 $g(x) = -\frac{1}{3}(x+2)^2 + 2$
 $h(x) = -2(x-3)^2 + 2$

b) $f(x) = -3(x-2)^2 + 3$
 $g(x) = -\frac{3}{2}(x+1)^2 - 1$
 $h(x) = \frac{1}{4}(x-2)^2 - 1$

d) $f(x) = (x-1)^2 - 3$
 $g(x) = -\frac{3}{4}x^2 + 2$
 $h(x) = 2(x+3)^2 - 3$

f) $f(x) = -2(x-3)^2 - 1$
 $g(x) = -\frac{1}{4}x^2$
 $h(x) = -3(x-1)^2 + 3$

h) $f(x) = \frac{3}{2}(x+3)^2 + 1$
 $g(x) = -3x^2 + 2$
 $h(x) = \frac{3}{2}(x-3)^2 - 1$

j) $f(x) = (x-1)^2 - 1$
 $g(x) = -(x+2)^2$
 $h(x) = -\frac{1}{2}(x-2)^2$

l) $f(x) = -\frac{3}{4}(x-2)^2$
 $g(x) = -(x+2)^2 + 3$
 $h(x) = -\frac{1}{2}(x-2)^2 + 3$

n) $f(x) = -3x^2 - 1$
 $g(x) = -(x-3)^2 + 2$
 $h(x) = \frac{1}{2}(x-2)^2 - 1$

p) $f(x) = \frac{3}{2}(x+1)^2$
 $g(x) = -\frac{1}{4}(x+3)^2 + 3$
 $h(x) = -3(x-2)^2 - 1$

r) $f(x) = -2(x-3)^2 + 2$
 $g(x) = (x+1)^2$
 $h(x) = \frac{1}{2}(x+2)^2 - 2$

t) $f(x) = -2(x-1)^2 - 1$
 $g(x) = \frac{1}{2}x^2$
 $h(x) = \frac{2}{3}(x+3)^2 + 1$

u) $f(x) = (x + 1)^2 + 1$
 $g(x) = -\frac{1}{3}(x - 1)^2 - 1$
 $h(x) = -\frac{3}{2}(x - 2)^2 + 3$

w) $f(x) = -\frac{1}{2}(x - 3)^2 + 1$
 $g(x) = -\frac{1}{4}(x + 1)^2 + 3$
 $h(x) = \frac{1}{2}(x - 1)^2$

y) $f(x) = (x - 3)^2$
 $g(x) = -\frac{2}{3}(x + 2)^2 + 2$
 $h(x) = -(x - 2)^2 + 1$

v) $f(x) = -(x - 3)^2 + 3$
 $g(x) = (x - 1)^2 + 1$
 $h(x) = \frac{1}{2}(x + 3)^2$

x) $f(x) = \frac{3}{2}(x - 2)^2 - 3$
 $g(x) = (x + 3)^2 + 1$
 $h(x) = 2(x + 1)^2$

z) $f(x) = \frac{3}{2}(x - 1)^2 - 1$
 $g(x) = \frac{2}{3}(x - 3)^2 - 2$
 $h(x) = -\frac{1}{2}(x - 1)^2$