Graphs & Functions

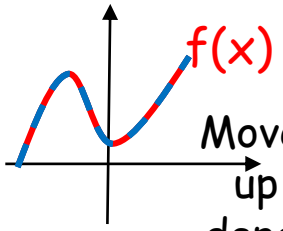
Remember we can combine these together !!

$y = f(x) \pm k$

Move vertically up or downs depending on k

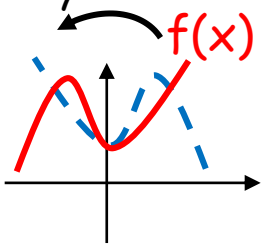
+ ↑

- ↓



$y = f(-x)$

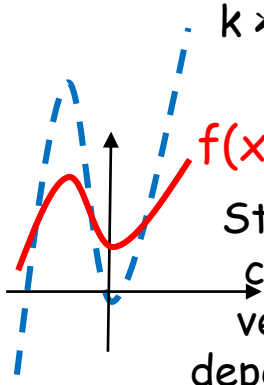
flip in y-axis



$y = kf(x)$

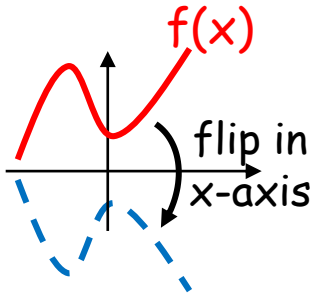
0 < k < 1 compress

k > 1 stretch

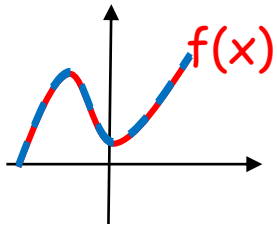


Stretch or compress vertically depending on k

$y = -f(x)$



$y = f(x \pm k)$

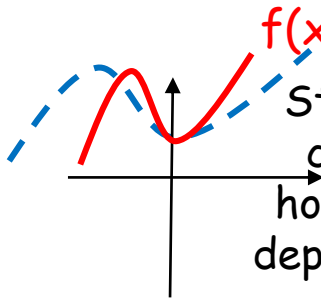


Move horizontally left or right depending on k

- →

← +

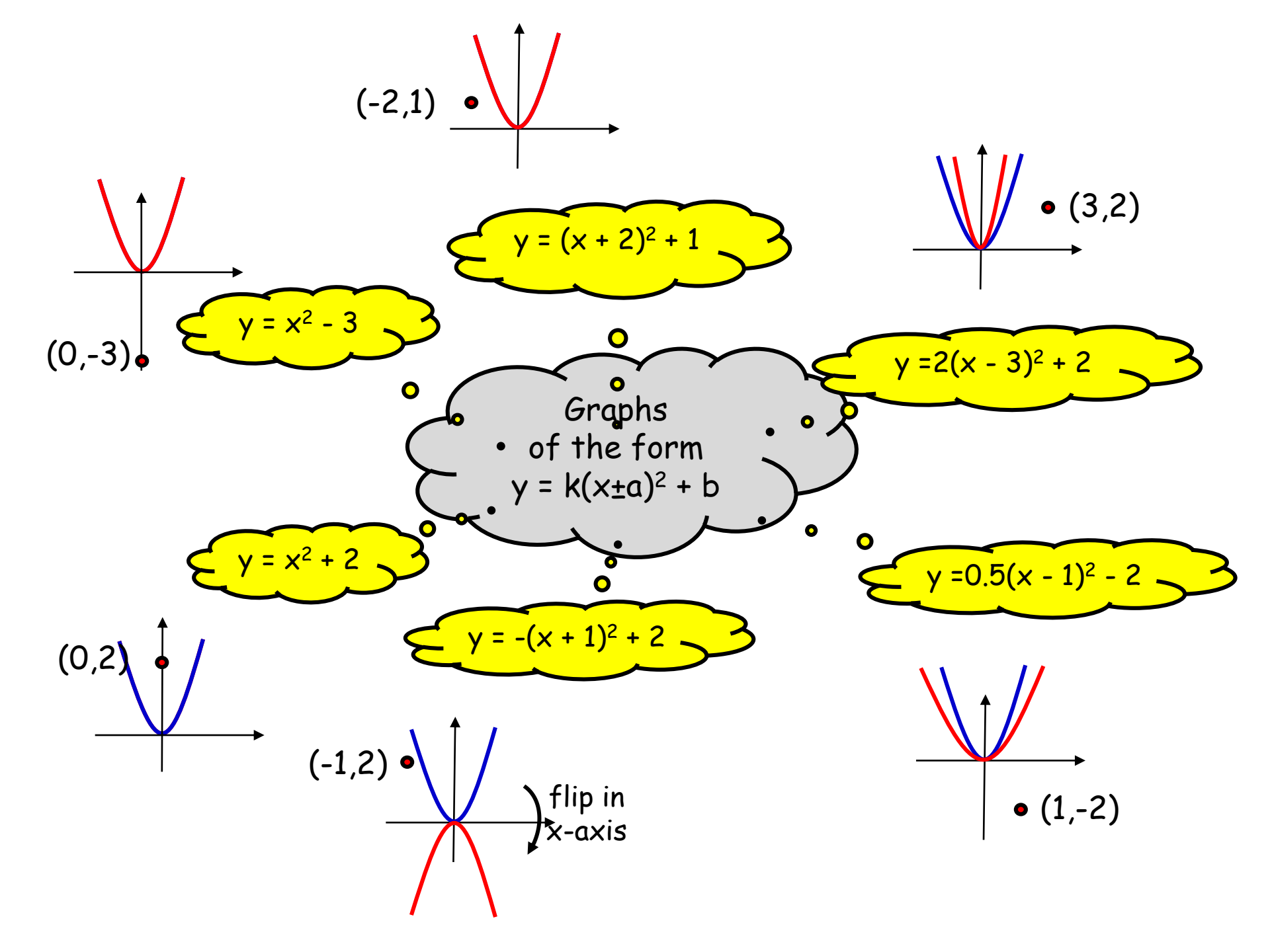
$y = f(kx)$



Stretch or compress horizontally depending on k

0 < k < 1 stretch

k > 1 compress


(-2,1)
y = (x + 2)² + 1
(3,2)
y = x² - 3
(0,-3)
y =2(x - 3)² + 2
Graphs
• of the form
y = k(x±a)² + b
y = x² + 2
y =0.5(x - 1)² - 2
y = -(x + 1)² + 2
(0,2)
(-1,2)
flip in
x-axis
(1,-2)