Combined Transformations

We may combine all the rules we learned so far into one single big rule!

1) a)Write the transformations, in order, if $y = f(x)$ is transformed to $y = -3f(2(x+4)) - 7$

   b) What is the transformed point for $(5, -2)$?

2) a)Write the transformations, in order, if $y = f(x)$ is transformed to $y = -4f(6 - 3x) + 1$

   b) What is the transformed point for $(3, 2)$?

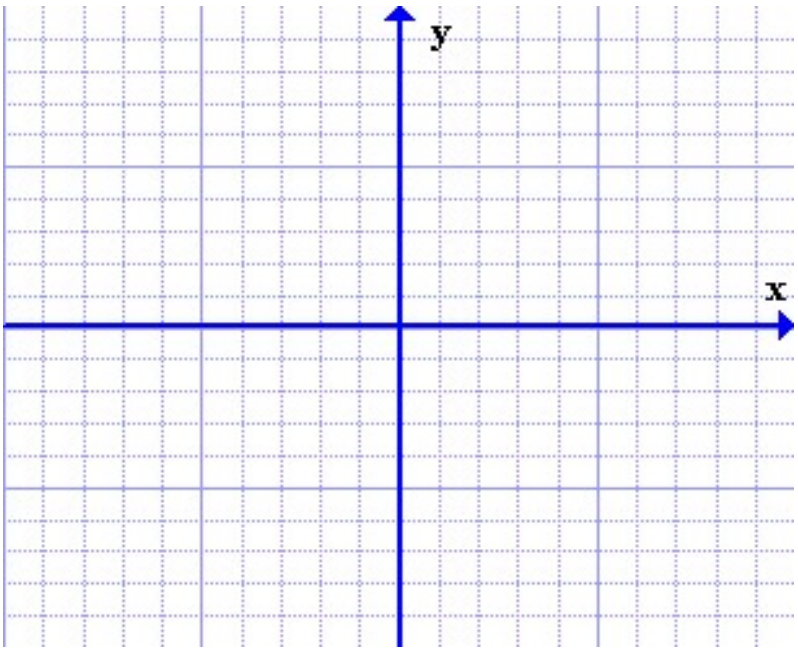
3) If point (–2, 1) is on the graph of $y = f^{-1}(x)$, what point is on $y = 5f(4 + 2x) - 1$?

4) If $9x^2+16y^2=144$, determine the equation after the following transformations:

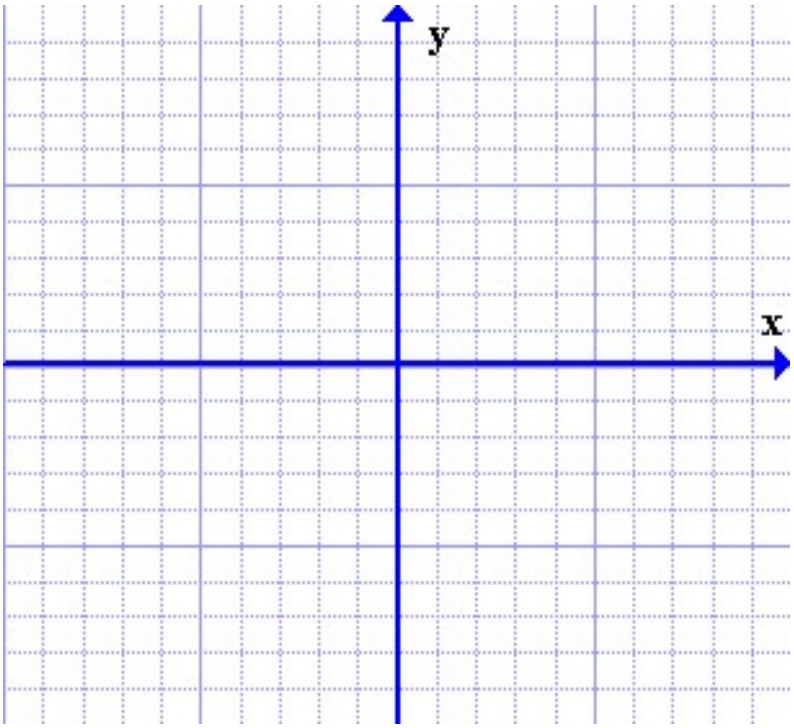
a) Horizontal expansion by 2 and vertical compression by 0.5

b) Vertical expansion by 3 and horizontal translation 2 units to the right.

5) Graph the function $y = -2(x-2)^2 + 3$ using transformations.



6) Graph the function $y = -2\sqrt{2x-4} + 1$.



7) Graph the function $y = 2f(\frac{1}{2}x - 1) + 1$