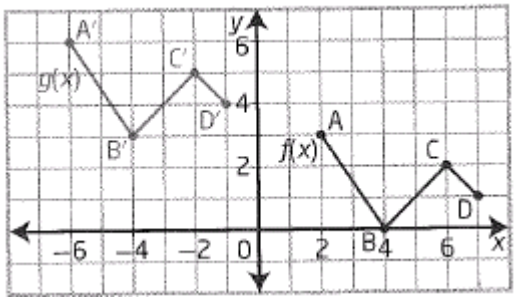
A1) Describe how the graph of $y = f(x+5)+3$ relates to the graph of $y = f(x)$.

B1) The point (6, –2) is on the graph of $y = f(x)$. Determine the coordinates of the corresponding point on the graph of $y = f(x+5)+3$ (same as above).

C1) Write the equation of the image of $y = x^2$ after a horizontal translation of 8 units right and a vertical translation of 2 units down.

C2) A translation has been applied to the graph of $y = f(x)$ to obtain the graph of $y = g(x)$. Determine the equation of the translated function.



A2) Describe how the graph of $y+2=f(x-4)-10$ relates to the graph of $y=f(x)$.

B2) The point (–1, 3) is on the graph of $y=f(x)$. Determine the coordinates of the corresponding point on the graph of $y+2=f(x-4)-10$ (same as above).

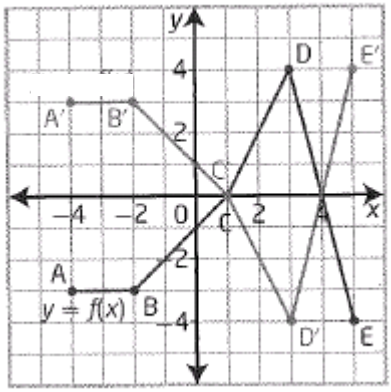
C3) Write the equation of the image of $y=\sqrt{x}$ after a horizontal translation of 3 units left and a vertical translation of 1 unit up.

D1) Describe how the graph of $y=\sqrt{-x}$ relates to the graph of $y=\sqrt{x}$.

E1) The point (3, –5) is on the graph of $y=f(x)$. Determine the coordinates of the corresponding point on the graph of $y=f(-x)$ (same as above).

F1) Write the equation of the image of $y=|x+1|$ after a reflection in the x-axis.

F2) A reflection has been applied to the graph of $y=f(x)$ to obtain the graph of $y=g(x)$. Determine the equation of the reflected function.



D2) Describe how the graph of $y = -|x|$ relates to the graph of $y = |x|$.

E3) The point (–7, –2) is on the graph of $y = f(x)$. Determine the coordinates of the corresponding point on the graph of $y = -f(x)$.

F3) Write the equation of the image of $y = \sqrt{x}$ after a reflection in the y-axis.

G1) Describe how the graph of $y = 3f(2x)$ relates to the graph of $y = f\left(x\right)$.

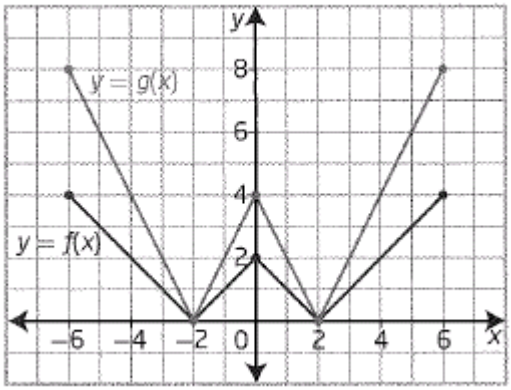
H1) The point (3, –6) is on the graph of $y = f(x)$. Determine the coordinates of the corresponding point on the graph of $y = 3f(2x)$ (same as above).

I1) Write the equation of the image of $y = x^2$ after a vertical compression by a factor of $\frac{1}{2}$ and a horizontal compression by a factor of $\frac{1}{5}$.

G2) Describe how the graph of $y = \frac{1}{2}f(3x)$ relates to the graph of $y = f(x)$.

H2) The point (3, –6) is on the graph of $y = f(x)$. Determine the coordinates of the corresponding point on the graph of $y = \frac{1}{2}f(3x)$ (same as above).

I2) A transformation has been applied to the graph of $y = f(x)$ to obtain the graph of $y = g(x)$. Determine the equation of the transformed function.



J1) Describe how the graph of $y = -3f(x-2)+1$ relates to the graph of $y = f(x)$.

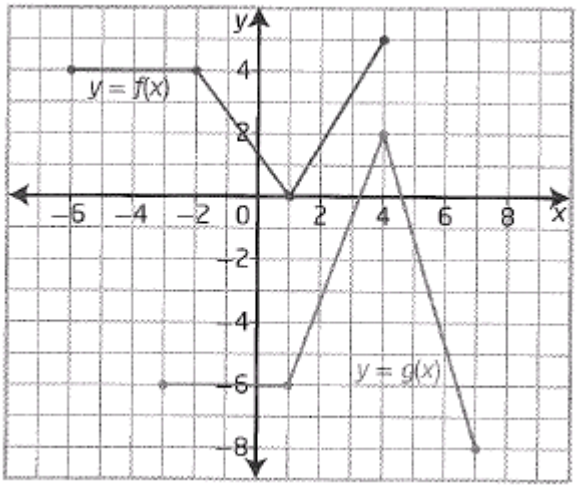
K1) The point (3, –3) is on the graph of $y = f(x)$. Determine the coordinates of the corresponding point on the graph of $y = -3f(x-2)+1$ (same as above).

L1) Write the equation of the image of $y = x^3$ after a horizontal expansion by a factor of 3, a reflection in the y-axis, a horizontal translation of 1 units right and a vertical translation of 2 units down.

J2) Describe how the graph of $y=\frac{1}{2}|3x-6|-1$ relates to the graph of $y=|x|$.

K2) The point (3, –6) is on the graph of $y=f(x)$. Determine the coordinates of the corresponding point on the graph of $y=\frac{1}{2}f(3x-6)-1$.

L2) A series of transformations has been applied to the graph of $y=f(x)$ to obtain the graph of $y=g(x)$. Determine the equation of the transformed function.



M1) Determine the equation of the inverse for the equation $y=(x-3)^2$

N1) Sketch the graph of $y=(x-3)^2$ and its inverse on the same graph.

O1) Is the inverse a function? If not, determine the restrictions on the domain in order for it to be a function.