Transform Practice

This is practice for the analytic view of transformations.

If you are having trouble figuring out how this works, try watching these videos for an explanation!

YouTube link: `https://www.youtube.com/watch?v=nWBnfpSbjQw`

YouTube link: `https://www.youtube.com/watch?v=2D_Fbegjm7I`

Problem 1 *Consider the transformation of the function $f(x)$ given by*

$$g(x) = -4f(-8x).$$

If the point $(-10, -8)$ is on the graph of $f(x)$, what point must be on the graph of $g(x)$? $(\boxed{\frac{5}{4}}, \boxed{32})$.

Problem 2 *Consider the transformation of the function $f(x)$ given by*

$$g(x) = 4f(-2x).$$

If the point $(-1, -10)$ is on the graph of $f(x)$, what point must be on the graph of $g(x)$? $(\boxed{\frac{1}{2}}, \boxed{-40})$.

Problem 3 *Consider the transformation of the function $f(x)$ given by*

$$g(x) = 5f(-3x).$$

If the point $(-5, 5)$ is on the graph of $f(x)$, what point must be on the graph of $g(x)$? $(\boxed{\frac{5}{3}}, \boxed{25})$.

Problem 4 *Consider the transformation of the function $f(x)$ given by*

$$g(x) = -8f(3x).$$

If the point $(3, 5)$ is on the graph of $f(x)$, what point must be on the graph of $g(x)$? $(\boxed{1}, \boxed{-40})$.

Learning outcomes: