Problem.

The transformation from f to g represents a _____ stretch.

f(x) = square root x and g(x) = 6 square root of x

Solution.

Since $af(x)$ stretches/compresses $f(x)$ vertically, the transformation from $f(x)$ to $g(x) = 6f(x)$ represents a vertical stretch. Thus, the answer is: vertical.