inverse functions

example

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Let $f(x) = 2x - 3$, then it's inverse is $f^{-1}(x) = \dfrac{x+3}{2}$.

We can check this both ways:

$$f^{-1}(f(x)) = \frac{(2x-3)+3}{2} = \frac{2x}{2} = x$$

$$f(f^{-1}(x)) = 2\left(\frac{x+3}{2}\right) - 3 = x + 3 - 3 = x$$

Since both compositions yield x, the functions are indeed inverses

monotonic functions