Fill in the Blanks | Inverse Two-Step Functions

Question	Function Machines	Answer
$f(x) = 3x - 1$ Find $f^{-1}(x)$	$x \rightarrow \times 3 \rightarrow -1 \rightarrow f(x)$ $f^{-1}(x) \leftarrow \div 3 \leftarrow +1 \leftarrow x$	$f^{-1}(x) = \frac{x+1}{3}$
$f(x) = x^2 - 5$ Find $f^{-1}(x)$	$x \rightarrow$ *square* $\rightarrow -5 \rightarrow f(x)$ $f^{-1}(x) \leftarrow$ *square root* $\leftarrow +5 \leftarrow x$	$f^{-1}(x) = \sqrt{x+5}$
$f(x) = \frac{x-3}{2}$ Find $f^{-1}(x)$	$x \rightarrow -3 \rightarrow \div 2 \rightarrow f(x)$ $f^{-1}(x) \leftarrow +3 \leftarrow \times 2 \leftarrow x$	$f^{-1}(x) = 2x + 3$
$f(x) = 5(x+2)$ Find $f^{-1}(x)$	$x \rightarrow +2 \rightarrow \times 5 \rightarrow f(x)$ $f^{-1}(x) \leftarrow -2 \leftarrow \div 5 \leftarrow x$	$f^{-1}(x) = \frac{x}{5} - 2$
$g(x) = \frac{x}{4} + 7$ Find $g^{-1}(x)$	$x \rightarrow \div 4 \rightarrow +7 \rightarrow g(x)$ $g^{-1}(x) \leftarrow \times 4 \leftarrow -7 \leftarrow x$	$g^{-1}(x) = 4(x-7)$
$f(x) = 5x^2$ Find $f^{-1}(x)$	$x \rightarrow$ *square* $\rightarrow \times 5 \rightarrow f(x)$ $f^{-1}(x) \leftarrow$ *square root* $\leftarrow \div 5 \leftarrow x$	$f^{-1}(x) = \sqrt{\frac{x}{5}}$
$h(x) = \frac{1}{x} - 2$ Find $h^{-1}(x)$	$x \rightarrow$ *reciprocal* $\rightarrow -2 \rightarrow h(x)$ $h^{-1}(x) \leftarrow$ *reciprocal* $\leftarrow +2 \leftarrow x$	$h^{-1}(x) = \frac{1}{x+2}$
$f(x) = (x-4)^3$ Find $f^{-1}(x)$	$x \rightarrow -4 \rightarrow$ *cube* $\rightarrow f(x)$ $f^{-1}(x) \leftarrow +4 \leftarrow$ *cube root* $\leftarrow x$	$f^{-1}(x) = \sqrt[3]{x} + 4$