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| **Fill in the Blanks** | **Harder Inverse Functions** |

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| $$f(x)$$ | **Write as** $$y=…$$ | **Swap** $x$**and** $y$ | **Make** $y$ **the subject** | **Write as** $f^{-1}\left(x\right)=…$ |
| $$f\left(x\right)=\frac{x}{x+2}$$ | $$y=\frac{x}{x+2}$$ | $$x=\frac{y}{y+2}$$ | $$xy+2x=y$$ | $$2x=y-xy$$ | $$2x=y(1-x)$$ | $$y=\frac{2x}{1-x}$$ | $$f^{-1}\left(x\right)=\frac{2x}{1-x}$$ |
| $$f\left(x\right)=\frac{x-3}{x}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{x}{2x+1}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{3x}{x-5}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{x+2}{x-1}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{x+3}{x+1}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{2x+1}{3-x}$$ |  |  |  |  |  |  |  |
| $$f\left(x\right)=\frac{5-2x}{x-3}$$ |  |  |  |  |  |  |  |