

Solutions

2.1 Solve $2x+3=11$, giving $x=4$.

2.2 Apply g first: $g(4)=16$; then $f(16)=2\times 16+3=35$.

2.3 Substitute into the square root: $\sqrt{(11-2)}=\sqrt{9}=3$.

3.1 False. For $f(x)=x^2$, $f(-1)=f(1)=1$, so the inverse would have two outputs for input 1. Restricting the domain, for example $x\geq 0$, makes an inverse function possible.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.