

Solutions

2.1 Expand then collect: $3x-x=2x$.

2.2 $4-2=2$, a nonzero counterexample.

2.3 $(6+1)^2=49$.

3.1 False. x and x^2 both equal 1 at $x=1$ but equal 2 and 4 at $x=2$. An identity requires equality at every allowed input, supported by algebra.

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