

Inverse Functions and Restricted Domains: Apply and Create



Use the matching sheet ID when checking answers.

Use what you learned to explain, construct or apply an idea.

1. Why does x^2 over all real numbers fail the one-to-one condition?

Look for:

- Gives two different inputs with one output.

One possible response: Both 2 and -2 map to 4.

2. Restrict x^2 to $x \geq 0$. What inverse rule and domain are appropriate?

Look for:

- States the nonnegative restriction and inverse.

One possible response: The inverse is $\sqrt{x}$ with input domain $x \geq 0$.

Open responses use criteria and an illustrative response. Other well-supported responses can be acceptable.