

Objective 4 - Inverse

Find the inverse of a function, if it exists.

Link to section in online textbook

First, watch [this video](#) to learn when a function has an inverse and how to find the inverse of a function. Feel free to pause the video and fill out the notes as you go.

Question 1 Determine whether the function below is 1-1.

$$f(x) = ??$$

Feedback(attempt): “Yes” or “No”.

If $f(x)$ is 1-1, find the inverse and define the domain on which the inverse is valid. If $f(x)$ is not 1-1, put “NA” for all answer blocks.

$$f^{-1}(x) = \boxed{??}$$

Feedback(attempt): To find the inverse of a function, switch x and y , then solve for y . Don't round.

Domain of $f^{-1}(x)$: $(\boxed{??}, \boxed{??})$

Hint: Think about the shape of the original function: are there places where the function is not defined?

Question 2 Determine whether the function below is 1-1.

$$f(x) = ??$$

Learning outcomes:
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Feedback(attempt): “Yes” or “No”.

If $f(x)$ is 1-1, find the inverse and define the domain on which the inverse is valid. If $f(x)$ is not 1-1, put “NA” for all answer blocks.

$$f^{-1}(x) = \boxed{NA}$$

Feedback(attempt): To find the inverse of a function, switch x and y , then solve for y . Don’t round.

Domain of $f^{-1}(x)$: $\boxed{NA} \boxed{NA}, \boxed{NA} \boxed{NA}$

Hint: Think about the shape of the original function: are there places whether the function is not defined?

Question 3 Determine whether the function below is 1-1.

$$f(x) = ??$$

\boxed{Yes}

Feedback(attempt): “Yes” or “No”.

If $f(x)$ is 1-1, find the inverse and define the domain on which the inverse is valid. If $f(x)$ is not 1-1, put “NA” for all answer blocks.

$$f^{-1}(x) = \boxed{??}$$

Feedback(attempt): To find the inverse of a function, switch x and y , then solve for y . Don’t round.

Domain of $f^{-1}(x)$: $\boxed{(\boxed{??}, \boxed{??})}$

Hint: Think about the shape of the original function: are there places whether the function is not defined?

Question 4 Determine whether the function below is 1-1.

$$f(x) = ??$$

\boxed{Yes}

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Feedback(attempt): “Yes” or “No”.

If $f(x)$ is 1-1, find the inverse and define the domain on which the inverse is valid. If $f(x)$ is not 1-1, put “NA” for all answer blocks.

$$f^{-1}(x) = \boxed{??}$$

Feedback(attempt): To find the inverse of a function, switch x and y , then solve for y . Don’t round.

$$\text{Domain of } f^{-1}(x): \left(\boxed{??}, \boxed{??} \right]$$

Hint: Think about the shape of the original function: are there places where the function is not defined?

Question 5 Determine whether the function below is 1-1.

$$f(x) = ??$$

Feedback(attempt): “Yes” or “No”.

If $f(x)$ is 1-1, find the inverse and define the domain on which the inverse is valid. If $f(x)$ is not 1-1, put “NA” for all answer blocks.

$$f^{-1}(x) = \boxed{??}$$

Feedback(attempt): To find the inverse of a function, switch x and y , then solve for y . Don’t round.

$$\text{Domain of } f^{-1}(x): \left(\boxed{??}, \boxed{??} \right)$$

Hint: Think about the shape of the original function: are there places where the function is not defined?
