Transforming Functions

Problem Card 1

Diego wants to find a function that fits his data. He transformed the graph of his original function to create a new function that fits better.

What is the equation of Diego's new function?

Transforming Functions

Data Card 1

- The original function is $f(x) = 33(0.6)^x$.
- He shifted the graph left by 0.5 units.
- He shifted the graph down by 45 units.
- The data represents the temperature of a bottle of water that has been outside for x hours.

Transforming Functions

Problem Card 2

Priya notices that two graphs, f and g, look very similar. She writes g as an equation in terms of f based on her observations.

What is Priya's equation for g?

Transforming Functions

Data Card 2

- The graph of g is shifted 17 units up from f.
- The graph of g is $\frac{1}{3}$ as wide as the graph of f.
- Both graphs are parabolas.

Transforming Functions

Problem Card 1

Diego wants to find a function that fits his data. He transformed the graph of his original function to create a new function that fits better.

What is the equation of Diego's new function?

Transforming Functions

Data Card 1

- The original function is $f(x) = 33(0.6)^x$.
- He shifted the graph left by 0.5 units.
- He shifted the graph down by 45 units.
- The data represents the temperature of a bottle of water that has been outside for x hours.

Transforming Functions

Problem Card 2

Priya notices that two graphs, f and g, look very similar. She writes g as an equation in terms of f based on her observations.

What is Priya's equation for g?

Transforming Functions

Data Card 2

- The graph of g is shifted 17 units up from f.
- The graph of g is $\frac{1}{3}$ as wide as the graph of f.
- Both graphs are parabolas.

CC BY NC 2024 Illustrative Mathematics®