

## 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.

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