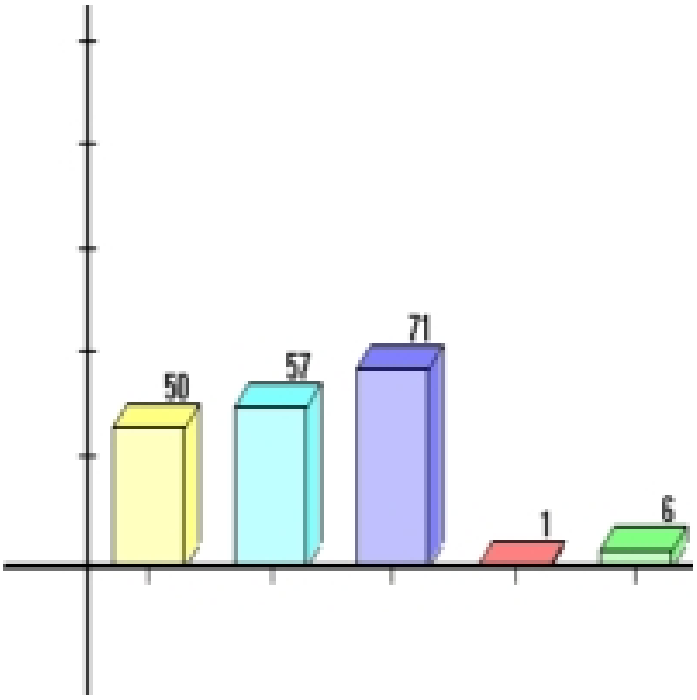
Quiz 1

A ray travels from point A to point B, and passes through a thick piece of glass on the way. A second ray travels the same distance from A to B, but passes through a thin piece of glass. The phase of the second ray at point B will be

A. Less than that of the first ray
B. More than that of the first ray
C. Equal to that of the first ray

Class Vote:



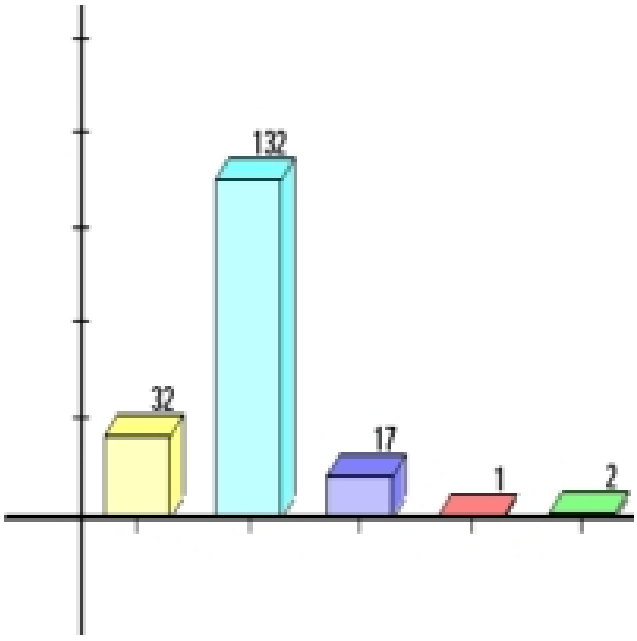
Correct answer is A. The second ray will arrive at point B sooner. Neither ray changes its frequency while traveling the path A to B, so the phase will be proportional to the time.

Quiz 2

A ray travels from point A to point B, and passes through a thick piece of glass on the way. A second ray travels from A to B travels through a thin piece of glass, and ends up with the same phase as the first ray. The distance the second ray travels must be

A. Less than that of the first ray
B. More than that of the first ray
C. Equal to that of the first ray

Class Vote:



Correct answer is B. In order to delay the ray that travels through less glass, it must travel a longer path.