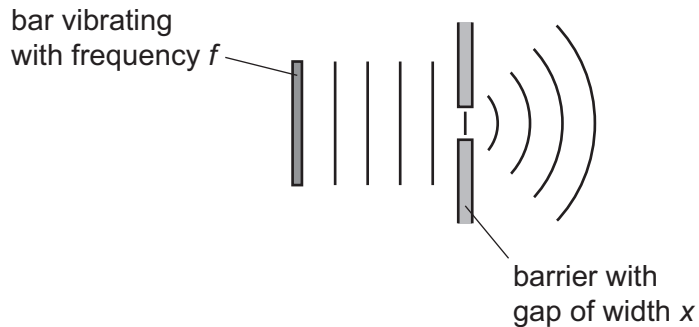


28 A bar vibrates with frequency f to produce water waves in a ripple tank.



The waves pass through a gap of width x in a barrier so that diffraction occurs.

Which combination of vibration frequency and gap width will produce the smallest angle of diffraction?

	vibration frequency	gap width
A	$\frac{f}{2}$	$\frac{x}{2}$
B	$\frac{f}{2}$	$2x$
C	$2f$	$\frac{x}{2}$
D	$2f$	$2x$

29 A small boat is in a tank of water. The boat is connected to a bar that vibrates with frequency f and amplitude a .