

1. An object's wavenumber k ____ as its momentum increases.

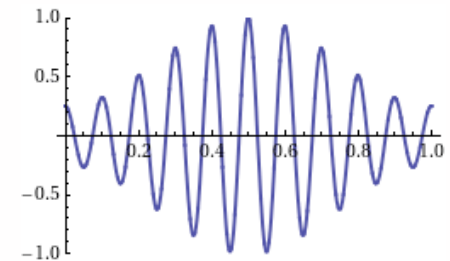
- A) gets larger B) stays the same C) gets smaller

2. Which wave has the greater wavenumber k ?

- A)  B)  C) both the same

3. In this animation, the *phase* velocity moves to the

- A) left B) right



4. If $X = A + iB$ where A and B are real, then $|X|$ is

- A) $A^2 + B^2$ B) $A^2 - B^2$ C) $\sqrt{A^2 + B^2}$ D) $\sqrt{A^2 - B^2}$

5. The uncertainty Δx of the position of a plane wave is

- A) zero B) infinite C) neither of these

$$\Psi(x, t) = Ae^{i(kx - \omega t)}$$

6. Which of these wavepackets has the greater uncertainty Δp of its momentum?

A) 

B) 

Quiz #5

AAACBB

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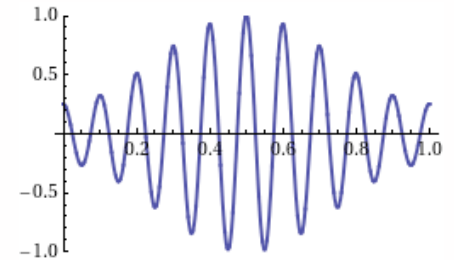


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https://upload.wikimedia.org/wikipedia/commons/c/c7/Wave_opposite-group-phase-velocity.gif



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