

Answer on Question #49019, Physics, Other

Task:

If ' u' is the instantaneous velocity of particle and ' v ' is the velocity of wave then

- 1) ' u ' is perpendicular to ' v '
- 2) ' u ' is parallel to ' v '.
- 3) $|u|$ is equal to $|v|$
- 4) $|u| = (\text{slope of wave front}) |v|$.

Answer:

' u ' is not perpendicular to ' v ' and is not parallel to ' v ' because we consider the general case. if we consider the instantaneous velocity vector of the particle and velocity vector of wave, so they are combined by this relation: **4) $|u| = (\text{slope of wave front}) |v|$.**

<http://www.AssignmentExpert.com/>