Compare compressions/rarefactions in a longitudinal travelling wave with crests/troughs in a transverse travelling wave

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| --- | --- | --- |
|   | Crests/troughs in a transverse travelling wave | Compressions/rarefactions in a longitudinal travelling wave |
| (1) Separation | The separation between two adjacent crests or troughs is the wavelength. | The separation between two adjacent compressions or rarefactions is the wavelength. |
| (2) Displacement from equilibrium position  | The greatest | Zero |
| (3) Speed | Zero | The greatest |

The displacements at a certain instant along a longitudinal travelling wave:

