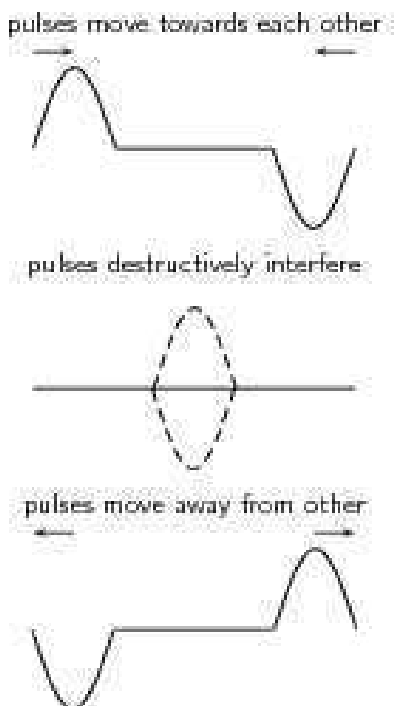


- Destructive interference takes place when two pulses meet and cancel each other. The amplitude of the resulting pulse is the sum of the amplitudes of the two initial pulses. If the initial amplitudes are equal the amplitude of the pulse formed by interference will be zero.

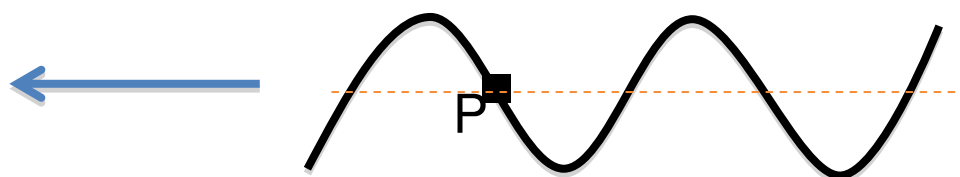


**Radio Broadcast 17 Sept 18:00 -19:00**

**Questions for Discussion**

**Question 1**

A transverse wave is moving to the left.



a) What is the direction of the velocity of the particle at point P?

- A      B      C      D

**Question 2**

Vibrations in the earth's crust deep beneath the sea can cause a Tsunami. The frequency of a vibration was  $60\text{s}^{-1}$ . The amplitude of the pulse generated was 10m and the speed of the pulse was  $300\text{m}\cdot\text{s}^{-1}$ .

- 2.1 Determine the period of the pulse. (4)  
2.2 Determine the wavelength of the pulse. (5)

**Radio Broadcast 18 Sept 18:00 -19:00****Questions for Discussion****Question 1:**

A fly flaps its wings back and forth 200 times each second. Calculate the period of a wing flap.

**Question 2:**

Microwave ovens produce radiation with a frequency of 2 450 MHz ( $1\text{ MHz} = 10^6\text{ Hz}$ ) and a wavelength of 0,122 m. What is the wave speed of the radiation?

**Question 3:**

A wave travels along a string at a speed of  $1,5\text{m}\cdot\text{s}^{-1}$ . If the frequency of the source of the wave is 7,5 Hz, calculate:

- a) the wavelength of the wave  
b) the period of the wave