SUMATIF HARIAN IPA KELAS VIII MATERI GETARAN DAN GELOMBANG

A. Soal Pilihan Ganda (Pilihlah satu jawaban yang benar !)

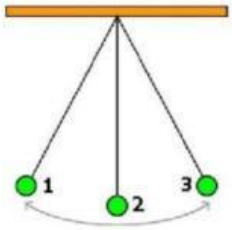
1. Based on the medium through which they propagate, waves are classified into…
   A. Transverse waves and longitudinal waves
   B. Mechanical waves and electromagnetic waves
   C. Sound waves and light waves
   D. Ocean waves and sound waves
2. An object completes 120 vibrations in 1 minute. The period of the object's vibration is ....
   A. 0.25 seconds B. 0.5 seconds C. 2 seconds D. 4 seconds
3. The number of vibrations that occur in one second is called ....
   A. amplitude B. period C. frequency D. displacement
4. Consider the following statement!
   A simple pendulum swings from point A to point B, then returns to point A. This motion constitutes ....
   A. Half an oscillation B. One full oscillation
   C. Two full oscillations D. A quarter of an oscillation
5. A pendulum completes 40 oscillations in 20 seconds. The frequency of the pendulum's oscillation is ....
   A. 0.5 Hz B. 2 Hz C. 20 Hz D. 40 Hz
6. A wave is ....
   A. The motion of an object without a specific direction
   B. An oscillation that propagates and carries energy
   C. The displacement of an object from one place to another
   D. The motion of an object that is always circular
7. A wave in which the direction of vibration is perpendicular to the direction of propagation is called ....
   A. Longitudinal wave B. Mechanical wave
   C. Transverse wave D. Sound wave
8. An example of a longitudinal wave in everyday life is ....
   A. A wave on a rope B. A wave on the surface of water
   C. A light wave D. A sound wave in the air
9. A wave has a frequency of 5 Hz and a wavelength of 4 meters. The wave speed is ....
   A. 5 m/s B. 9 m/s C. 20 m/s D. 25 m/s
10. In a transverse wave, the distance between two consecutive wave crests is called ....
    A. Amplitude B. Frequency C. Period D. Wavelength

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B. Tarik tanda pensil pada jawaban yang sesuai

1. Gelombang Bunyi		Gelombang Elektromagnetik
2. Amplitudo		Gelombang Mekanik
3. Getaran Merambat		Gelombang Transversal
4. Gelombang Cahaya		Gelombang
5. Gelombang Air		Simpangan Terjauh

C. Carilah hubungan yang tepat antara rumus Periode, frekuensi, dan banyak getaran pada bandul dengan pasangannya.

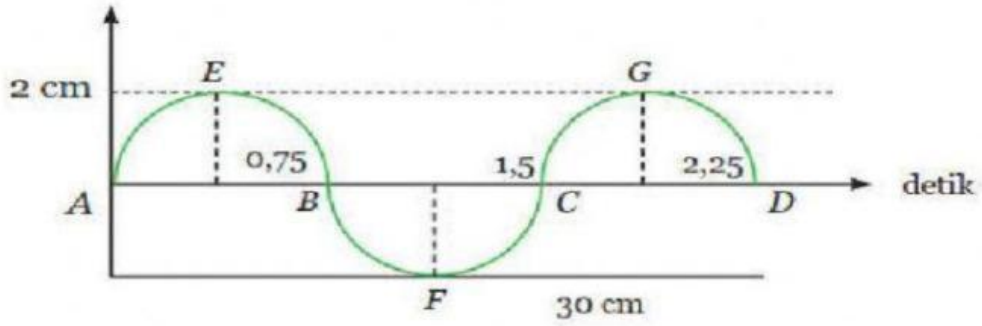


Banyak Getaran	$T = \frac{t}{n}$
Periode	$f = \frac{n}{t}$
Frekuensi	$n = f \times t$

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D. Isilah jawaban yang tepat pada titik-titik !

Perhatikan gambar berikut!



Tentukan :

a. Jumlah gelombang = ….
b. Amplitudo gelombang = ….. cm
c. Periode gelombang (T) = …. detik
d. Panjang gelombang (λ)= …. Cm = …. m
e. Cepat rambat gelombang (V) (ambil 2 angka dibelakang koma)

$$V = \frac{\lambda}{periode\ (T)} = \frac{\dots}{\dots.} = \cdots \quad m/detik$$

f. Jumlah gelombang selama 2 menit (n), t= 2 menit =……. detik

$$n = \frac{waktu(t)}{Periode\ (T)} = \frac{\dots.}{\dots.} = \cdots$$

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