Introduction to Simple Harmonic Motion:

$$\rightharpoonaccent{x}=1.20cos⁡(6.0t)$$

***Use the above displacement equation to answer the following questions:***

1. What is the amplitude of the motion?

2. How far does this object move in one period?

3. What is the period of the motion?

4. What is the initial position of the object?

 A. zero B. maximum positive C. maximum negative

5. What is the initial velocity of the object?

 A. zero B. maximum positive C. maximum negative

6. What is the initial acceleration of the object?

 A. zero B. maximum positive C. maximum negative

7. What is the maximum speed reached by this object?

8. What is the maximum acceleration of this object?

9. What is the objects position at t=2.0s?

10. Write the corresponding velocity and acceleration equations.

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$$\rightharpoonaccent{v}=-2.40sin(4.8t)$$

***Use the above velocity equation to answer the following questions:***

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2. What is the period of the motion?

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5. What is the initial acceleration of the object?

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6. What is the amplitude of the oscilation?

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