

Physics 2205
Quiz 9—Form A

28 October, 1999

1. A 1-kg mass attached to a spring oscillates with a period of 1.0 s. What is the spring constant?

- A) 6.3 N/m
- B) 20 N/m
- C) 40 N/m
- D) You must know the amplitude.

2. A joule is a unit of **energy** with units of:

- A) $\text{kg m} / \text{s}^2$
- B) $\text{kg} / (\text{m}^2 \text{s}^2)$
- C) $\text{kg} / (\text{m s}^2)$
- D) $\text{kg m}^2 / \text{s}^2$

Some useful equations:

$$P = F/A \qquad T = 2\pi (l/g)^{1/2}$$
$$E = \frac{1}{2} k A^2 = \frac{1}{2} m v_0^2 \qquad T = 2\pi (m/k)^{1/2}$$

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Quiz 9—Form B

28 October, 1999

1. A simple pendulum of length 1 m swings with a period of 3.2 s. Where is this pendulum most likely located?

- A) The Earth ($g=9.80 \text{ m/s}^2$)
- B) The Moon ($g=1.62 \text{ m/s}^2$)
- C) Mars ($g=3.75 \text{ m/s}^2$)
- D) Venus ($g=8.88 \text{ m/s}^2$)

2. A pascal is a unit of **pressure** with units of:

- A) $\text{kg m} / \text{s}^2$
- B) $\text{kg} / (\text{m}^2 \text{s}^2)$
- C) $\text{kg} / (\text{m s}^2)$
- D) $\text{kg m}^2 / \text{s}^2$

Some useful equations:

$$P = F/A \qquad T = 2\pi (l/g)^{1/2}$$
$$E = \frac{1}{2} k A^2 = \frac{1}{2} m v_0^2 \qquad T = 2\pi (m/k)^{1/2}$$