**Physics 20 - Lesson 25**

**Simple Harmonic Motion – Springs**

/ 32

1)

*Fs*



/4

2)

4*Fs*



/3

3)

*Fs*



/3

4) A possible point of confusion for this situation is that the force on the two springs is the same. Some people mistakenly get the idea that some of the force is “absorbed” by the first spring before it gets to the second spring, but the same tension force exists throughout the springs.

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5)

a) The period does not depend on the amplitude. If it did, (x) displacement would be a variable in the equation.

/3 b) There is an inverse relationship between (k) and (T). Therefore, as the spring constant increases the period decreases.

c) There is a direct relationship between (m) and (T), therefore as mass increases the period also increases.

6)

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7)

/4

8)

/6