**Hooke’s Law Practice Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. In an exercise machine, a spring with a constant of 120 N/m is pulled 0.8 m by a weightlifter. How much force is the spring exerting on the weightlifter?

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| Formula: |  Plug in numbers:  | Answer:  |

2. A sack of radishes with a mass of 0.2 kg is placed on a spring scale in the grocery store. The spring is stretched 0.032 m.

 a. What is the weight of the sack of radishes?

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| Formula: |  Plug in numbers:  | Answer:  |

 b. What is the spring constant?

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| Formula: |  Plug in numbers: | Answer:  |

3. A pinball launcher is pulled back 0.75m. If the spring constant is 700 N/m, what is the force of the spring on the player’s hand?

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| Formula: |  Plug in numbers:  | Answer:  |

4. What is the period of a spring system with a spring constant of 200 N/m and a mass of 0.8 kg?

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| Formula: |  Plug in numbers:  | Answer:  |

5. What is the spring constant for a linear spring with a period of 0.45 seconds and a mass of 1.08kg?

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| Formula: |  Plug in numbers:  | Answer:  |

6. What is the spring constant for a linear spring with a period of 5 seconds and a mass of 80 kg?

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| Formula: |  Plug in numbers:  | Answer:  |

7. Calculate the magnitude of the weight hanging on a spring system that has a spring constant of 400 N/m and a period of 3 seconds. (2 formuals)

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| Formula: |  Plug in numbers:  | Answer:  |