Name

Date

Physics Quiz- Energy

\*The drawing box is optional in all of the problems\*

1) How much gravitational potential energy does a 4 kg ball have sitting on a table 1.3 m off of the floor?

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| Draw | Units | Formula | Algebra | Solve |

2) A football player has a mass of 100 kg and runs at a speed of 6.0 m/s. What is his kinetic energy?

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| Draw | Units | Formula | Algebra | Solve |

3) How much energy is stored in a pole with a spring constant of 15 N/m if it is deflected (moved) 1.6 m?

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| Draw | Units | Formula | Algebra | Solve |

4) A weightlifter uses a force of 325 N to lift a set of weights 2.0 m off the ground. How much work did the weightlifter do?

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| Draw | Units | Formula | Algebra | Solve |

5) An escalator moves 20 people from the first floor to the second floor of a department store. The escalator does 55,900 J of work in 60 seconds. How much power does the escalator use?

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| Draw | Units | Formula | Algebra | Solve |

6) A white billiards ball (3 kg) is moving at 8 m/s towards a solid colored billiards ball (2 kg) that is stationary. The two collide and now the solid ball is moving 4 m/s. How fast is the white ball now moving?

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| draw | Two sets of variables | Formula with Algebra | Solve |

7) Two toy train cars have magnets in them. A kid pushes their red train (5 kg) at a speed of 4 m/s into their blue train (5 kg) which is already in motion at 1 m/s. The toy train cars hook together. What is their new speed?

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| draw | Two sets of variables | Formula with Algebra | Solve |