

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

### Worksheet on KE, PE

1. Bernice has to lift a 6 kg antique from a shelf that is only 1.3 m high to a higher shelf that is 2.1 m high (grandchildren, you know). How much work is required to protect her glassware?  
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2. Sherry and her bike have a total mass of 85 kg. Sherry rides her bike 1.8 km in 14 min with constant velocity. What is Sherry's kinetic energy?  
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3. Mike has added a rocket to his car, which has a combined mass of 1400 kg. The rocket can provide 2100 N of thrust for a distance of 509 m. If there is no friction, find the final speed of Mike's car?  
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4. David has taken up cliff diving. His mass is 65 kg as he stands at the edge of a 100 m cliff.  
**Using only PE and KE**, What is David's velocity just as he hits the water? \_\_\_\_\_

5. Dan starts skiing from rest at the top of a 50 m hill and skis down into the valley and ends at the top of the adjacent hill which is 35 m tall. What is his velocity at the top of the second hill if  $F_f = 0$ ? \_\_\_\_\_