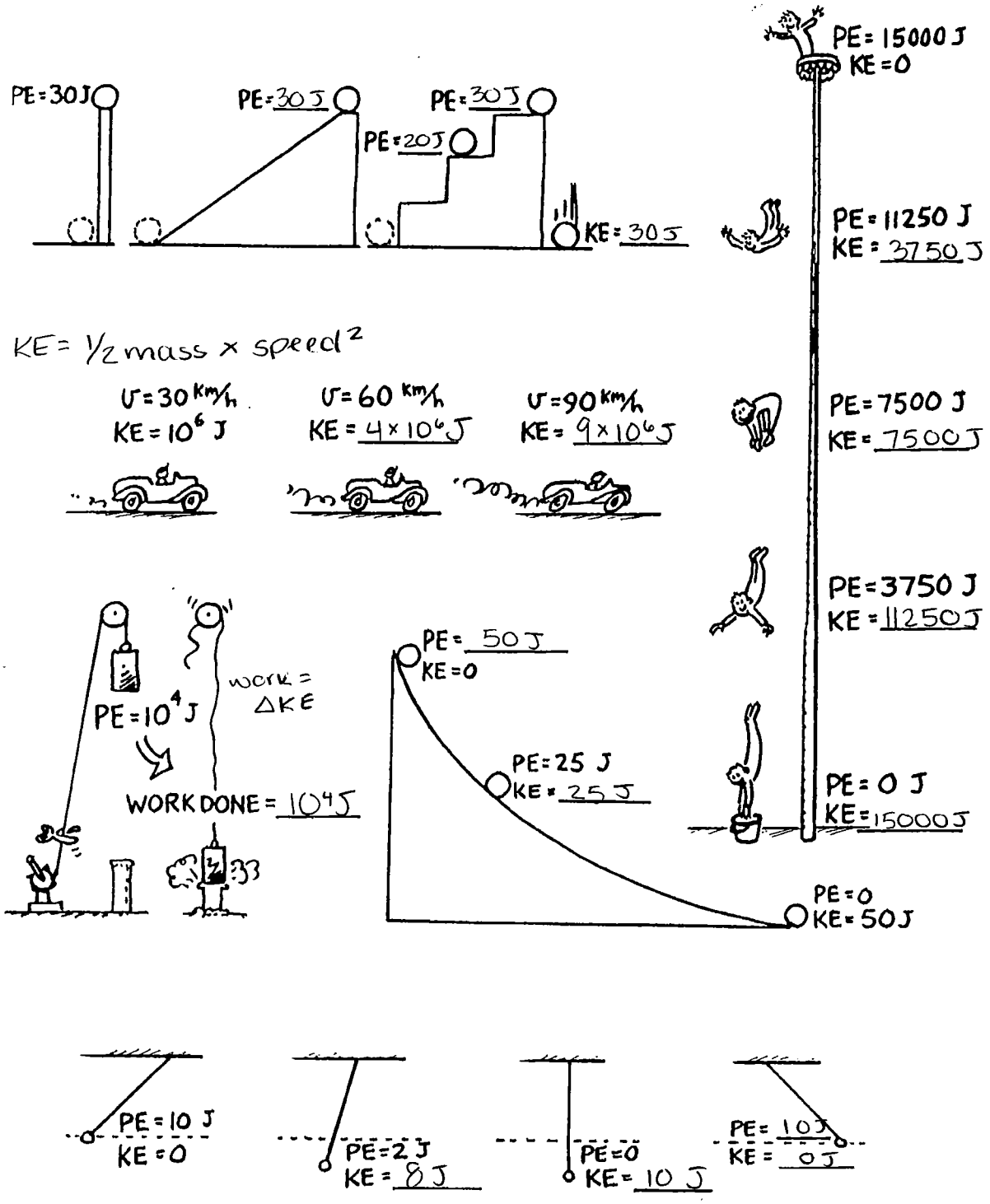
Potential and Kinetic Energy Worksheet

Name _____ Period _____ Date _____

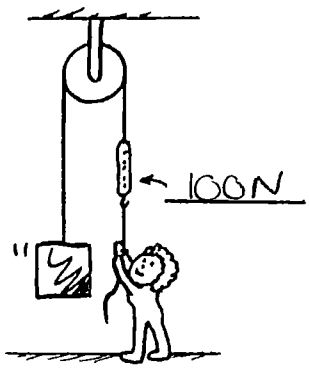
Concept-Development Practice Page 8–2

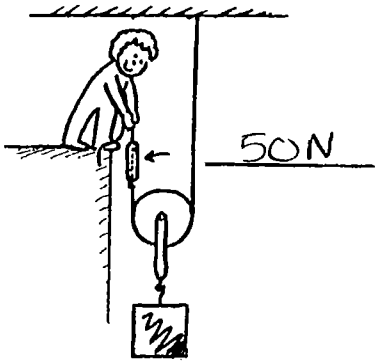
Chapter 8: Energy

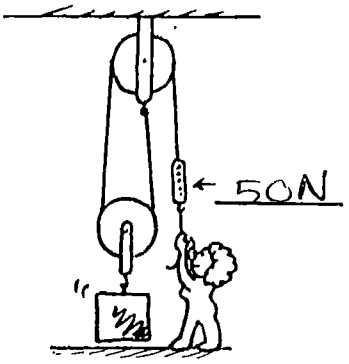
1. Fill in the blanks for the six systems shown.



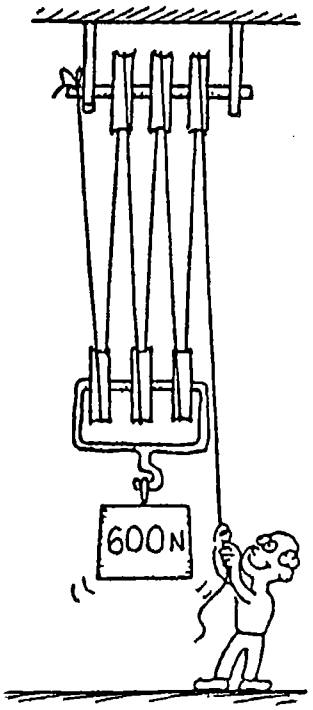
2. The woman supports a 100-N load with the friction-free pulley systems shown below. Fill in the spring-scale readings that show how much force she must exert.







3. A 600-N block is lifted by the friction-free pulley system shown.



a. How many strands of rope support the 600-N weight?

6

b. What is the tension in each strand?

600 N ÷ 6 strands = 100N

c. What is the tension in the end held by the man?

100N

d. If the man pulls his end down 60 cm, how many cm will the weight rise?

10cm

e. What is the ideal mechanical advantage of the pulley system?

input distance/output distance = 6

f. If the man exerts 60 joules of work, what will be the increase of PE of the 600-N weight?

The same, 60J

4. Why don't balls bounce as high during the second bounce as they do in the first?

During each bounce, some of the ball's mechanical energy is transformed into heat (and even sound), so the PE decreases with each bounce.