

Name: _____

_____ / 11

Chapter 7 Test Practice

Conceptual Physics

Parent Signature: _____

Section 7.1

1. Work is done in all of the following situations except
 - a. A crane lifts a heavy crate
 - b. A person carries groceries up a set of stairs
 - c. A person pushes on a car which does not budge
 - d. Two people push on a car which moves 1 m.
2. You push on a piano with a force of 50N and move it 2m. How much work have you done?
 - a. 2 J
 - b. 25 J
 - c. 50 J
 - d. 100 J
3. Sonya performs 98 J of work against gravity while lifting a 10-kg barbell. How high does she lift the barbell?
 - a. 1 m
 - b. 10 m
 - c. 20 m
 - d. 50 m
4. Alex weighs twice as much as Bob. Bob weighs twice as much as Carlos. They each climb a flight of stairs in the same amount of time. Who has more power?
 - a. Alex
 - b. Bob
 - c. Carlos
 - d. They all have the same power

Section 7.2

5. Which of the following is *not* a simple machine?
 - a. screw
 - b. clock
 - c. ramp
 - d. gears
6. What is the mechanical advantage of the lever shown on page 190?
 - a. 1/3
 - b. 2
 - c. 3
 - d. 6
7. The input force on the rope and pulley shown on page 191 is 2 N. What is the output force?
 - a. 2 N
 - b. 4 N
 - c. 6 N
 - d. 8 N
8. The mechanical advantage of the ramp shown on page 191 is 10. What is the height?
 - a. 2 m
 - b. 5 m
 - c. 10 m
 - d. 20m

Section 7.3

9. You can increase a machine's efficiency by decreasing the
a. power b. friction c. gravity d. energy
10. You build a machine which is 80% efficient. How many joules of work are put into the machine to produce 400J of output work?
a. 50 J b. 320 J c. 400 J d. 500 J
11. An elevator carries a 50 kg person up 10 m. The elevator does 7,000 J of input work. What is the efficiency of the elevator?
a. 50% b. 70% c. 90% d. 100%