

Chapter 6 REVIEW-Practice

6.1 Conceptual Questions

- _____ 1) Two men, Joel and Jerry, push against a car that has stalled, trying unsuccessfully to get it moving. Jerry stops after 10 min, while Joel is able to push for 5.0 min longer. Compare the work they do on the car.
A) Joel does 75% more work than Jerry. B) Joel does 50% more work than Jerry. C) Jerry does 50% more work than Joel. D) Joel does 25% more work than Jerry. E) Neither of them does any work.
- _____ 2) A truck has four times the mass of a car and is moving with twice the speed of the car. If K_t and K_c refer to the kinetic energies of truck and car respectively, it is correct to say that
A) $K_t = 16K_c$. B) $K_t = 4K_c$. C) $K_t = 2K_c$. D) $K_t = K_c$. E) $K_t = \frac{1}{2}K_c$.
- _____ 3) A 4.0 kg object is moving with speed 2.0 m/s. A 1.0 kg object is moving with speed 4.0 m/s. Both objects encounter the same constant braking force, and are brought to rest. Which object travels the greater distance before stopping?
A) the 4.0 kg object B) the 1.0 kg object C) Both objects travel the same distance. D) It cannot be determined from the information given.
- _____ 4) You slam on the brakes of your car in a panic, and skid a certain distance on a straight level road. If you had been traveling twice as fast, what distance would the car have skidded, under the same conditions?
A) It would have skidded 4 times farther. B) It would have skidded twice as far. C) It would have skidded 1.4 times farther. D) It would have skidded one half as far. E) It is impossible to tell from the information given.

6.2 Problems

- _____ 5) How much work would a child do while pulling a 12-kg wagon a distance of 4.3 m with a 22 N force?
A) 95 J B) 52 J C) 67 J D) 109 J
- _____ 6) You carry a 7.0-kg bag of groceries 1.2 m above the ground at constant speed across a 2.7 m room. How much work do you do on the bag in the process?
A) 0.00 J B) 82 J C) 185 J D) 157 J
- _____ 7) In physics, work is defined as
A) force times time. B) force divided by distance. C) distance divided by time. D) force divided by time. E) force times distance.
- _____ 8) If Nellie Newton pushes an object with twice the force for twice the distance, she does
A) twice the work. B) the same work. C) four times the work. D) eight times the work.
- _____ 9) The unit of work is the
A) watt. B) meter. C) joule. D) newton. E) second.

Name: _____

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- _____ 10) The amount of potential energy possessed by an elevated object is equal to
A) the power used to lift it. B) the distance it is lifted. C) the force needed to lift it. D) the work done in lifting it. E) the value of the acceleration due to gravity.
- _____ 11) Kinetic energy of an object is equal to
A) its mass multiplied by its acceleration squared. B) one half the product of its mass times its speed squared. C) its mass multiplied by its speed. D) one half the product of its mass times its speed. E) its mass multiplied by its acceleration.
- _____ 12) How much farther will a car traveling at 100 km/s skid than the same car traveling at 50 km/s?
A) Half as far. B) The same distance. C) Twice as far. D) Four times as far. E) Five times as far.
- _____ 13) An object that has kinetic energy must be
A) at rest. B) falling. C) moving. D) elevated.
- _____ 14) Which has greater kinetic energy, a car traveling at 30 km/h or a half-as-massive car traveling at 60 km/h?
A) The 60 km/h car B) Both have the same kinetic energy. C) The 30 km/h car

Chapter 6 REVIEW-Practice Answer Section

1)	ANS: E	PTS: 1	REF: Var: 1	
2)	ANS: A	PTS: 1	REF: Var: 1	
3)	ANS: C	PTS: 1	REF: Var: 1	
4)	ANS: A	PTS: 1	REF: Var: 1	
5)	ANS: A	PTS: 1	REF: Var: 33	
6)	ANS: A	PTS: 1	REF: Var: 50+	
7)	ANS: E	PTS: 1	DIF: 1	REF: p. 103
	OBJ: 8.1	STA: PI.4.4.1g		
8)	ANS: C	PTS: 1	DIF: 2	REF: p. 103 p. 104
	OBJ: 8.1	STA: PI.4.4.1g		
9)	ANS: C	PTS: 1	DIF: 1	REF: p. 104
	OBJ: 8.1	STA: PI.4.4.1g		
10)	ANS: D	PTS: 1	DIF: 2	REF: p. 107
	OBJ: 8.4	STA: PI.4.4.1c		
11)	ANS: B	PTS: 1	DIF: 1	REF: p. 108
	OBJ: 8.5	STA: PI.4.4.1d PI.4.4.1g		
12)	ANS: D	PTS: 1	DIF: 3	REF: p. 108
	OBJ: 8.5	STA: PI.4.4.1d PI.4.4.1g		
13)	ANS: C	PTS: 1	DIF: 2	REF: p. 108
	OBJ: 8.5	STA: PI.4.4.1d PI.4.4.1g		
14)	ANS: A	PTS: 1	DIF: 3	REF: p. 108
	OBJ: 8.5	STA: PI.4.4.1d PI.4.4.1g		