

MSC 1012 questions for Chapter 4 set 3

Conservation of energy:

NAME _____

1) What is the potential energy of a 2500 kg rock on the edge of a cliff that is 600 m high?

ANS: _____

2) A skier whose mass is 75 kg starts down a mountain and drops 450 m. At the bottom of the mountain the skier is traveling at 22 m s^{-1} . How much energy did the skier have to dissipate on the way down in friction?

ANS: _____

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1) $1.47 \times 10^7 \text{ J}$

- 2) Potential to start: 331 kJ
 E_k at bottom: 18.2 kJ
 Friction loss: 313 kJ