

**ERRATA SHEETS FOR NELSON 12 PHYSICS TEXTBOOK AND TEACHER  
RESOURCE**

## **Textbook**

Page 187: Change “Answer” for Problem 8 from 16% to 37%

## **Solutions Manual**

Page 239:

Remove the 2 lines corresponding to Problem 8 and replace with the following:

Let  $E_k$  be the initial kinetic energy of the toboggan and  $W$  be equal to the work done by the Force,  $F$  acting over a distance  $d$ . The resulting change in kinetic energy is equal to  $W$ . When Force  $F$  is applied parallel to the ground,

$$\begin{aligned} W &= Fd \\ &= 0.47 E_k \end{aligned}$$

When Force  $F$  is applied at an angle of  $38^\circ$  above the horizontal over the same distance,

$$\begin{aligned} W &= F\cos(38^\circ) \times d \\ &= Fd\cos(38^\circ) \\ &= 0.47\cos(38^\circ)E_k \\ &\approx 0.37 E_k \end{aligned}$$

Thus, the kinetic energy of the toboggan changes by 37% if the Force is applied at an angle of  $38^\circ$  above the horizontal over the same distance.