



Problem of the Week

Problem B and Solution

An Almost Clean Sweep

Problem

In July, Minh's family spends the month at their cottage. On July 1st, Minh swept up 80 g of sand.

- If Minh continues sweeping up 80 g of sand each day, how many kg of sand will Minh sweep up after 7 days?
- How much sand, in kg, will Minh sweep up by the end of July?
- Actually, Minh's broom is faulty. Alas, about a tenth of the sand ends up unswept. How much sand in total will Minh sweep up over the family's month at the cottage?

Solution

- In 7 days, Minh will sweep $80 \text{ g} \times 7 \text{ days} = 560 \text{ g}$, or $560 \div 1\,000 = 0.56 \text{ kg}$ of sand.
- By the end of July, Minh will sweep up $80 \text{ g} \times 31 \text{ days} = 2\,480 \text{ g}$, or 2.48 kg of sand.
- Since about a tenth of the sand is not swept up, the actual amount of sand Minh sweeps up will be nine tenths of the amount found in part b), or $0.9 \times 2\,480 = 2\,232 \text{ g}$, or 2.232 kg of sand.

