Name:

“CPR” Quiz #3 - Work and Power Intro

Attempt Description	Colour Highlighter or Pen	What does this tell you?
1st - Just your brain		What you already have in your long-term memory.
2nd - Just your notes/resources		What you understand, but not in your long-term memory.
3rd - With support from classmates or teacher		What you don’t understand.

When it comes to studying effectively, make sure you start with the material that was the 3rd attempt colour because that is what needs the most work.

You may find the following formulae useful.

$$E_k = \frac{1}{2}mv^2 \qquad \Delta E_p = mg\Delta h \qquad g = 10\ \text{N kg}^{-1} \qquad W = Fd$$

$$E(\text{thermal}) = mc\Delta T \qquad E(\text{thermal}) = mL$$

$$P = VI \qquad V = RI \qquad \Delta E = P\Delta t$$

This question was taken from the expired 2022 Mechanics Exam, Question 2.

A sandhill has a vertical height of 25 m. Ariana and her sandboard have a mass of 55 kg.

(b) Ariana carriers her sandboard to the top of a 25 m hill in 120 seconds.

(i) Calculate the work done to climb this hill.

[Delete and write your answer.]

(ii) Calculate the power that she uses to climb this hill.

[Delete and write your answer.]

(iii) Explain how she could lower the power output required to climb to the top of the hill.

[Delete and write your answer.]