Comparing Two Wall-Impact Records

Scoring guide · one credit per question · review written work against each rubric

Comparing Two Wall-Impact Records

Question 1

Choice (3)

The total momentum transfers in one second are 30 × 2 = 60 and 20 × 3 = 60 at equal area.

Question 2

More frequent hits can be offset by less momentum transferred per hit. The model compares the total transfer per second per area.

Question 3

The transfer per second doubles from 60 to 120 model units. The area also doubles, so the transfer per second per area and the pressure stay the same.

Question 4

Each square centimeter receives the same average momentum transfer per second as before. The larger panel records more total transfer because it includes more area.