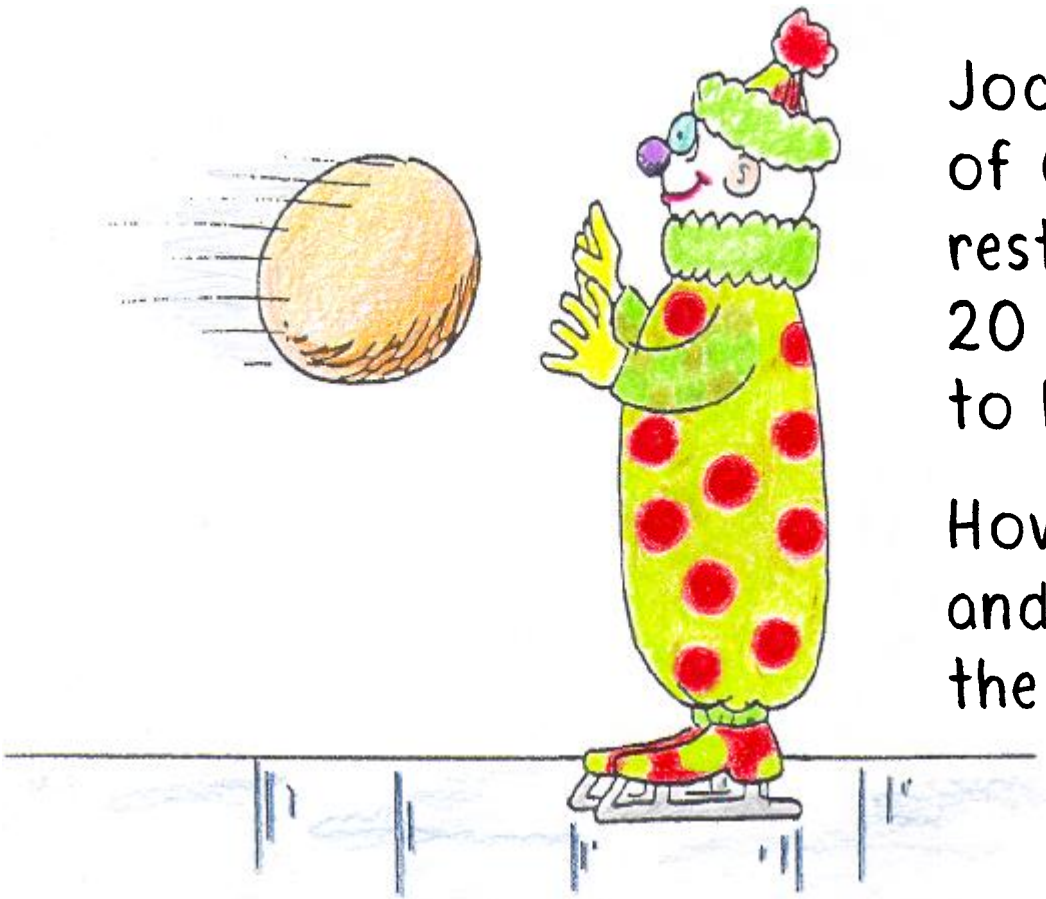
# NEXT-TIME QUESTION



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How fast does Jocko and the ball move across the ice?

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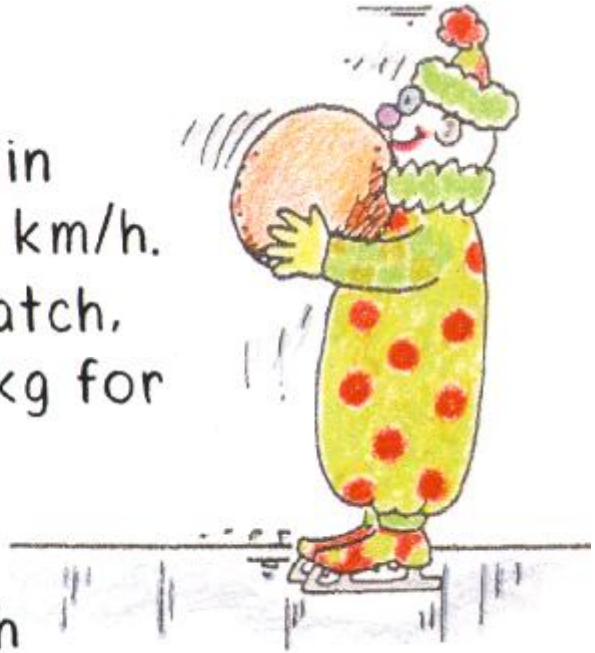
How fast does Jocko and the ball move across the ice?

Answer: 2.5 km/h

The momentum before the catch is all in the ball, 20 kg × 10 km/h = 200 kg · km/h. This is also the momentum after the catch, where the moving mass is 80 kg—60 kg for Jocko and 20 kg for the caught ball.

$$80\ \text{kg} \times v = 200\ \text{kg} \cdot \text{km/h}$$

$$v = \frac{200\ \text{kg} \cdot \text{km/h}}{80\ \text{kg}} = 2.5\ \text{km/h}$$



CONCEPTUAL Physics

ARBOR SCIENTIFIC
TOOLS THAT TEACH.