

STEP III, 2010 Q9 EC

9. Less than a fifth of the candidates attempted this, though it was the most popular of the non-Pure questions. Candidates were largely fairly successful or struggled to get started. Some of those failing to get anywhere equated the normal reaction on P to the component of P 's weight, completely ignoring the radial acceleration, and others got the sign of the force wrong. Nearly every candidate failed to justify imposing the non-negative condition on the normal reaction when $\theta = \frac{\pi}{2}$.



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