

**GCSE Physics A (Gateway)**

**J249/02 Physics A P5-P8 and P9 (Foundation Tier)**

**Question Set 6**

- 1 (a) A car has a total weight of 12 000 N. It has four tyres which each have an area of 25 cm<sup>2</sup> in contact with the road.

Calculate the pressure of the car on the road.

Answer = ..... N/cm<sup>2</sup>

[3]

- (b) Seatbelts in cars are made of a wide material that stretches in a crash.



- (i) Explain why it is important that the material is **wide**.

[1]

- (ii) Explain why it is important that the material is **stretchy**.

[1]

- (c) Children in cars use special seats with their own seatbelts.



The seatbelts for children are narrower than adult seatbelts.

Why is it safe for children's seatbelts to be **narrower** than adult seatbelts?

[2]

**Total Marks for Question Set 6: 7**

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