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| Year 12 Worksheet 1 – Formative Assessment 4 | | | |
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| **Name:** | **Teacher:** | **Score /10** | |
| **Comment:** | | | **Time allowed:**  **10 minutes** |

A car travelling at 30.0 ms–1 comes to a circular dip in the road. The radius of curvature of the dip is 20.0 m. The driver has a mass of 70.0 kg.

* 1. Draw a diagram showing the two forces acting on the driver, and the net force.
  2. What centripetal acceleration does the driver experience?
  3. What centripetal force does the driver experience?
  4. What upward force (called the normal force) does the car seat exert on the driver?
  5. How much heavier than normal does he feel?