1. **Connected Particles**

Use Newton's 2nd law, SUVAT and Fmax = R to solve problems about connected particles on rough and inclined surfaces.

**Example**

Two particles P and Q, of mass 2kg and 3kg respectively, are connected by a light, inextensible string. The string passes over a small smooth pulley which is fixed at the top of a rough inclined plane. The plane is inclined to the horizontal at an angle of 300. Particle P is held at rest on the inclined plane and Q hangs freely on the edge of the plane with the string vertical and taut. Particle P is released and it accelerates up the plane at 2.5ms-2. Find:

1. The tension in the string
2. The coefficient of friction between P and the plane
3. The force exerted by the string on the pulley

**Example** *(EdExcel M1 Jan 2006 Q7)*



**Additional Question (Connected Particles)**

*EdExcel M1 (Old) Jan 2013 Q7*





**Test Your Understanding** *(EdExcel M1 May 2013(R) Q3)*



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