1 A block of mass 12 kg is being pulled by a rope up a rough plane. The plane is inclined at an angle of 20° above the horizontal. The rope pulling the block is parallel to a line of greatest slope of the plane. The coefficient of friction between the block and the plane is 0.4. The acceleration of the block is $2\,\mathrm{m\,s^{-2}}$.

Find the tension in the rope. [4]

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