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**4.** A truck of mass 900 kg is moving along a straight horizontal road with the engine of the truck working at a constant rate of $P$ watts. The resistance to the motion of the truck is modelled as a constant force of magnitude $R$ newtons.
At the instant when the speed of the truck is $15\,\text{m s}^{-1}$, the deceleration of the truck is $0.2\,\text{m s}^{-2}$

Later the same truck is moving down a straight road inclined at an angle $\theta$ to the horizontal, where $\sin\theta = \frac{1}{30}$. The resistance to the motion of the truck is again modelled as a constant force of magnitude $R$ newtons. The engine of the truck is again working at a constant rate of $P$ watts.
At the instant when the speed of the truck is $12\,\text{m s}^{-1}$, the acceleration of the truck is $0.4\,\text{m s}^{-2}$

Find the value of $R$.

**(8)**

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**Q4**

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