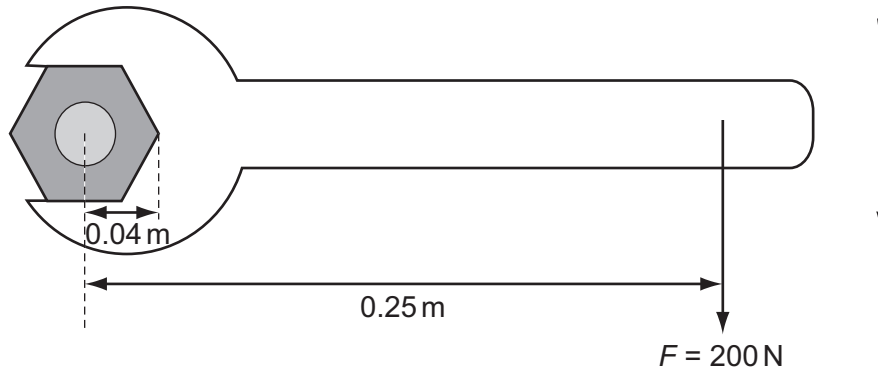


**12** A spanner is used to tighten a nut as shown.



A force  $F$  is applied at right-angles to the spanner at a distance of  $0.25\text{ m}$  from the centre of the nut. When the nut is fully tightened, the applied force is  $200\text{ N}$ .

What is the resistive torque, in an anticlockwise direction, preventing further tightening?

- A**  $8\text{ N m}$                       **B**  $42\text{ N m}$                       **C**  $50\text{ N m}$                       **D**  $1250\text{ N m}$

**Space for working**