

**22** The Mariana Trench in the Pacific Ocean has a depth of about 10 km.

Assuming that sea water is incompressible and has a density of about  $1020 \text{ kg m}^{-3}$ , what would be the approximate pressure at that depth?

**A**  $10^5 \text{ Pa}$

**B**  $10^6 \text{ Pa}$

**C**  $10^7 \text{ Pa}$

**D**  $10^8 \text{ Pa}$

**23** An elastic material with a Young modulus  $E$  is subjected to a tensile stress  $S$ . Hooke's Law is