

19 The data below are taken from a test of a petrol engine for a motor car.

power output	150 kW
fuel consumption	20 litres per hour
energy content of fuel	40 MJ per litre

Which expression will evaluate the efficiency of the engine?

A
$$\frac{150 \times 10^3}{40 \times 10^6 \times 20 \times 60 \times 60}$$

B
$$\frac{150 \times 10^3 \times 60 \times 60}{20 \times 40 \times 10^6}$$

C
$$\frac{150 \times 10^3 \times 40 \times 10^6 \times 20}{60 \times 60}$$

D
$$\frac{150 \times 10^3 \times 20}{40 \times 10^3 \times 60 \times 60}$$

20 What is represented by the gradient of a graph of force (vertical axis) against extension (horizontal axis)?

- A** elastic limit
- B** spring constant
- C** stress
- D** Young modulus

Space for working