19 A piston in a gas supply pump has an area of 400 cm<sup>2</sup> and it moves a distance of 25 cm during one stroke.

The pump moves the gas against a fixed pressure of 3000 Pa.

How much work is done by the piston during one stroke?

- **A** 30 J
- **B**  $3.0 \times 10^3 \, \text{J}$
- **C**  $3.0 \times 10^5 \text{ J}$  **D**  $3.0 \times 10^7 \text{ J}$

20 A transformer has the following input and output.

	potential difference/V	current/A
input	11 000	28
output	240	1200

What is the efficiency of the transformer?

- **A** 0.94 %
- **B** 1.0 %
- **C** 11%
- **D** 94%

Space for working