

## QUESTION



1. A piston-cylinder arrangement is shown in the figure. The piston is initially at the top of the cylinder. The gas is initially at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K.

2. A piston-cylinder arrangement is shown in the figure. The piston is initially at the top of the cylinder. The gas is initially at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K.

3. A piston-cylinder arrangement is shown in the figure. The piston is initially at the top of the cylinder. The gas is initially at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K.

4. A piston-cylinder arrangement is shown in the figure. The piston is initially at the top of the cylinder. The gas is initially at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K. The piston is then moved down to the bottom of the cylinder. The gas is now at a pressure of 10 bar and a temperature of 300 K. The piston is then moved back up to the top of the cylinder. The gas is now at a pressure of 1 bar and a temperature of 300 K.