

# Combined Gas Law Problems

Solve these problems.

1. If 10.0L of  $\text{CO}_2$  at 300kPa is injected into a 20L tank heated from 300K to 400K, what is the new pressure? (200 kPa)
2. A 25L sample of Ar gas at STP is depressurized to 50kPa and cooled to 100K. What is the new volume of the gas? (18.55 L)
3. If the volume of a 7L tank at STP is doubled and the temperature is cut in half, what is the new pressure? (25.1kPa)
4. If a 25L tank of a gas at 200kPa and 300K is heated to 400K and the volume doubles, what is the new pressure? (133.3 kPa)
5. What is the temperature of a 2L tank of gas at STP when the volume and pressure double? (1092 K)