Chapter 4 Question #14

Typically for gases:
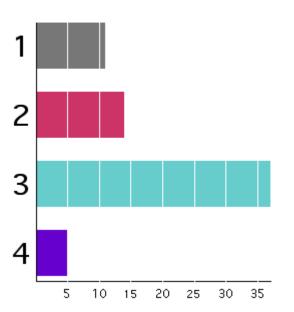
1) $C_v > C_p$

2) $C_v \approx C_p$

3) $C_v < C_p$

4) It depends on the gas, these are empirically determined quantities

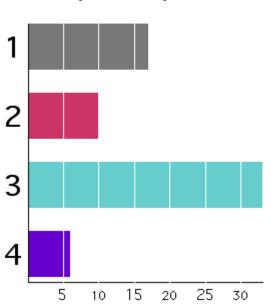**Chapter 4 Question 14 Answer:**

(3) Cv < Cp

Gases are compressible. If energy is added to them at constant pressure, they expand (pv=RT). As they expand, some of the energy goes towards doing work. When a gas is constrained (constant volume), relatively less energy needs to be added to them to change their temperature (since the work is zero).

Class Response (2003):

Question 1 : Question 1

Class Response (2002):

Question 2 : Question 2