

PART 1 - PHYSICS

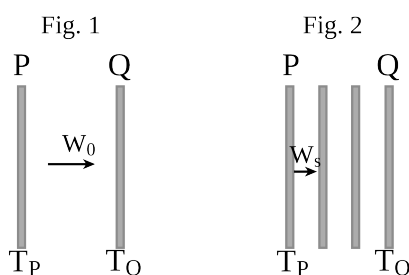
Topic : Thermal properties of matter

SECTION-1 : (Maximum Marks : 4)

- This section contains **ONE** question.
- The answer to each question is a **NON-NEGATIVE INTEGER**.
- For each question, enter the correct integer corresponding to the answer in the place designated to enter the answer.
- Answer to each question will be evaluated according to the following marking scheme :
 Full Marks : +4 If **ONLY** the correct answer is entered;
 Zero Marks : 0 In all other cases.

1. Two identical plates P and Q, radiating as perfect black bodies, are kept in vacuum at constant absolute temperatures T_P and T_Q , respectively, with $T_Q < T_P$, as shown in Fig. 1. The radiated power transferred per unit area from P to Q is W_0 . Subsequently, two more plates, identical to P and Q, are introduced between P and Q, as shown in Fig. 2. Assume that heat transfer takes place only between adjacent plates. If the power transferred per unit area in the direction from P to Q (Fig. 2) in the steady state is W_s , then the ratio $\frac{W_0}{W_s}$ is ____

[JEE Advanced 2025 Paper 1]



Scan or tap for the full solution



Space for Rough Work

JEE ADVANCED THERMAL PROPERTIES OF MATTER —
HEAT TRANSFER: RADIATION (BLACK BODY, WIEN'S LAW,
STEFAN'S LAW) — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

SECTION-1																											
Ques.	1																										
Ans.	3																										