Brain International School
Vikas Puri, New Delhi

ASSIGNMENT NO. 6

SUBJECT: MATHEMATICS   **CLASS-VIII**   **DECEMBER,2025**

CH-11 DIRECT AND INVERSE PROPORTION

Q1) The volume of a gas V varies inversely as the pressure P for a given mass of the gas. Fill in the blank spaces in the following table:

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
Volume (in cm³)	–	48	60	–	100	–	200
Pressure (in atmosphere)	2	–	$\frac{3}{2}$	1	–	$\frac{1}{2}$	–

Q2) The cost of 5 metres of cloth is ₹ 210. Tabulate the cost of 2, 4, 10 and 13 metres of cloth of the same type.

Q3) Six pumps working together empty a tank in 28 minutes. How long will it take to empty the tank if 4 such pumps are working together?

Q4) Mohit deposited a sum of ₹ 12000 in a Bank at a certain rate of interest for 2 years and earns an interest of ₹ 900. How much interest would be earned for a deposit of ₹ 15000 for the same period and at the same rate of interest?

Q5) A garrison of 120 men has provisions for 30 days. At the end of 5 days, 5 more men joined them. How many days can they sustain on the remaining provision?

Q6) In a scout camp, there is food provision for 300 cadets for 42 days. If 50 more persons join the camp, for how many days will the provision last?

Q7) If two cardboard boxes occupy 500 cubic centimetres space, then how much space is required to keep 200 such boxes?

Q8) Under the condition that the temperature remains constant, the volume of gas is inversely proportional to its pressure. If the volume of gas is 630 cubic centimetres at a pressure of 360 mm of mercury, then what will be the pressure of the gas if its volume is 720 cubic centimetres at the same temperature ?

ASSERTION AND REASONING BASED QUESTION

Q9) **Assertion (A) –15 books weigh 6 kg. 6 books weighs 2.4 Kg**

Reason (R) –A direct proportion shows the direct relation between two quantities.

Choose the correct answer:

a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

c) Assertion is true but Reason is false.

d) Assertion is false but Reason is true.

Q 10) CASE STUDY BASED QUESTION

A company hires workers to assemble 100 machines. 4 workers take 15 days to complete the work. The company decides to increase the number of workers to complete the work faster.

On the basis of the given information, answer the following questions:

1. If 6 workers are hired, how many days will they take to complete the work?

2. If the time limit is 10 days, how many workers are required?

3. If each worker is paid ₹400 per day, find the total wages paid when 5 workers are hired.

4. Identify whether this is a case of direct proportion or inverse proportion.