

CASE STUDY 1

The given table shows the freezing points in °F of different gases at sea level. The relation between °C and °F is as follows:

$$\frac{C}{5} = \frac{F-32}{9}$$

Gas	Freezing Point at Sea Level (°F)	Freezing Point at Sea Level (°C)
Hydrogen	-435	
Krypton	-251	
Oxygen	-369	
Helium	-458	
Argon	-309	

1. Calculate the freezing point of Krypton in °C at sea level.
2. Evaluate the difference of freezing point of Argon and Oxygen in °C at sea level.
3. Find the average of freezing point of Hydrogen, Helium and Argon in °C at sea level.

CASE STUDY 2

Smita buys books from a dealer for her bookstall. She buys 35 storybooks, 18 historical fictions, 12 travel guides, 24 children's book, 8 cookbooks, 16 adventure books, 12 thrilling books and 14 mysterious book and 6 educational materials. Price of each book is same category wise.

A cookbook costs Rs. x , four thrilling books cost Rs. y , eight adventure books cost Rs. z , a travel guide costs Rs. 60 and a mysterious book cost Rs. 120. Price of a story book is Rs. 280 and two historical fictions costs Rs. 300. Price of each children's book is double of each educational material.

The sum of a cookbook, a mysterious book and two travel guides costs Rs. 300. One educational material costs Rs. 80 and two thrilling books cost Rs. 190. The total of all the adventure and children's books is Rs. 5440.



1. Calculate the price of each cookbook.
2. Evaluate the price of each adventure book.
3. Find the total cost of two thrilling books, 5 children's book and 4 historical fictions.
4. Evaluate the value of $3x - 5y + 6z$.