

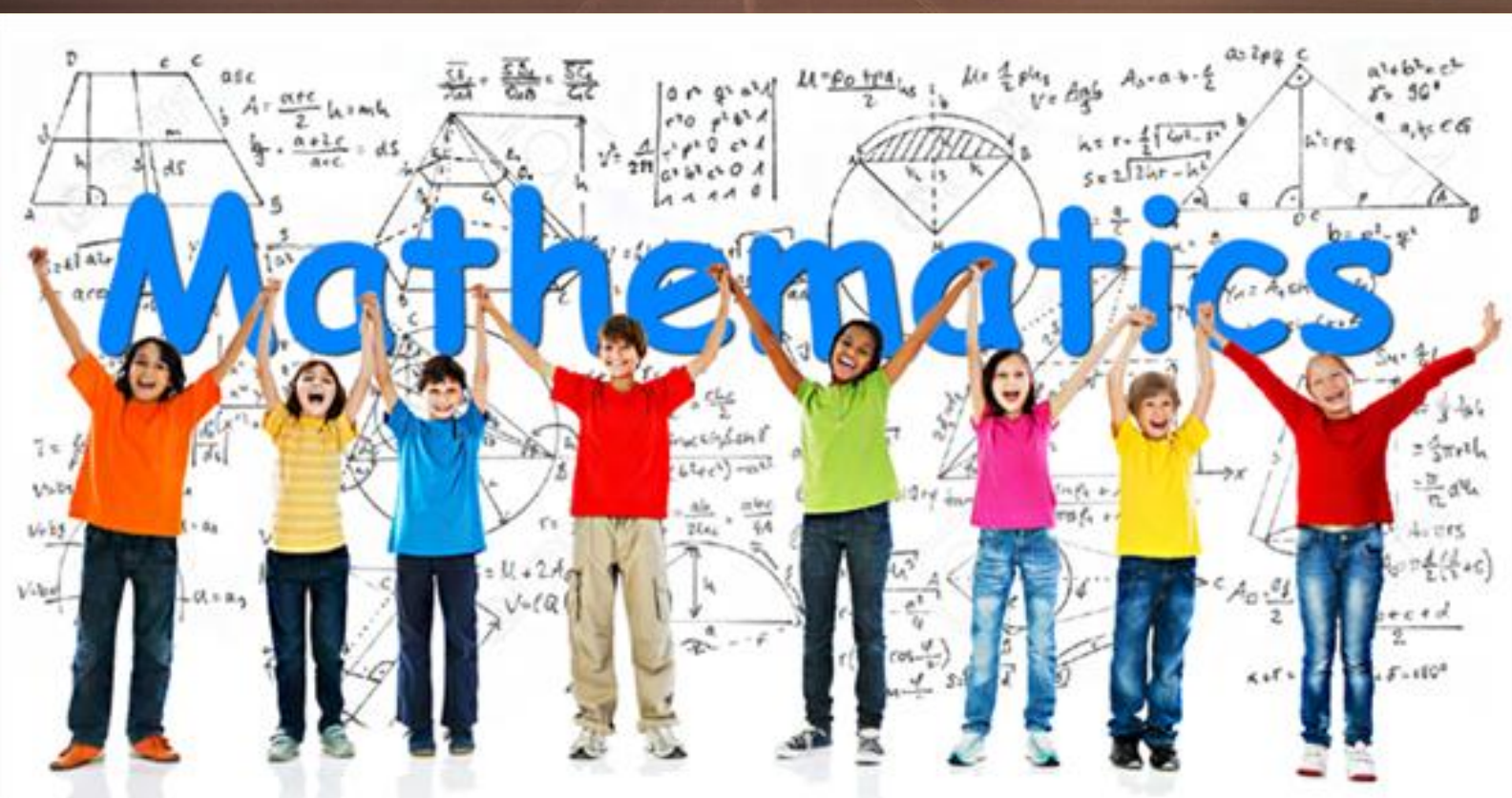
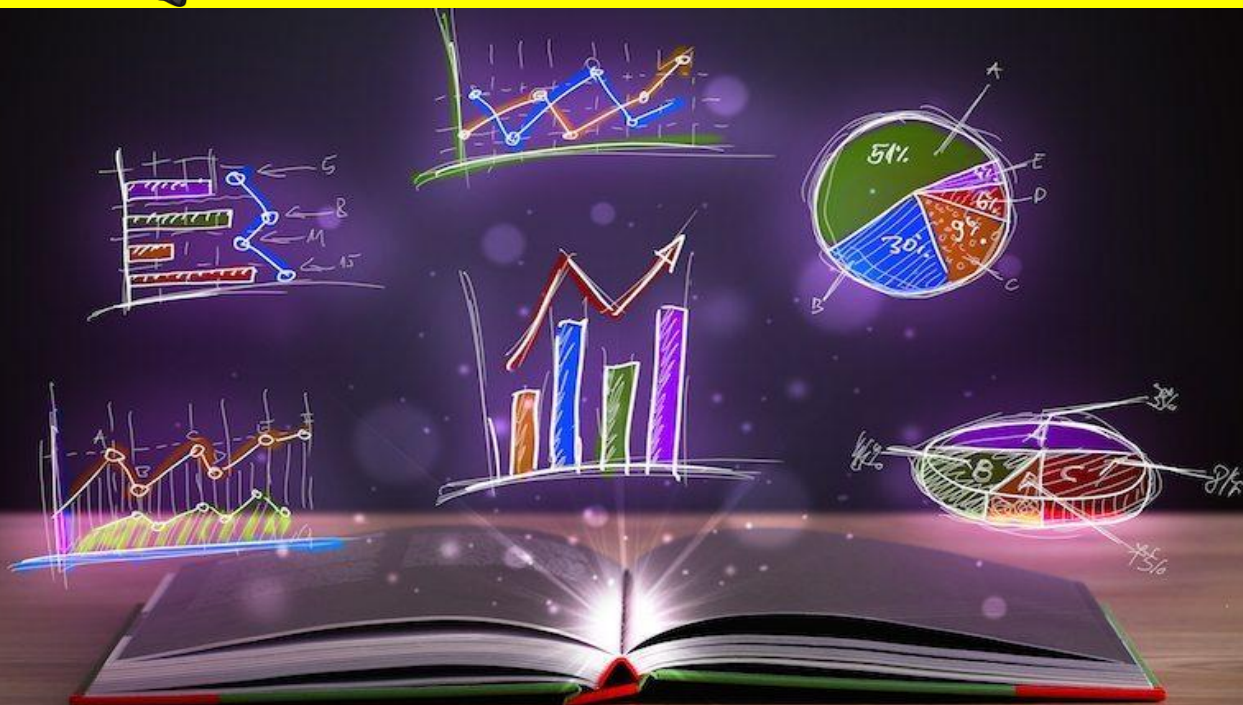
MATHLETE



(अक्सर पूछा करते हैं.....)

Classes - 9th to 10th

Series
8



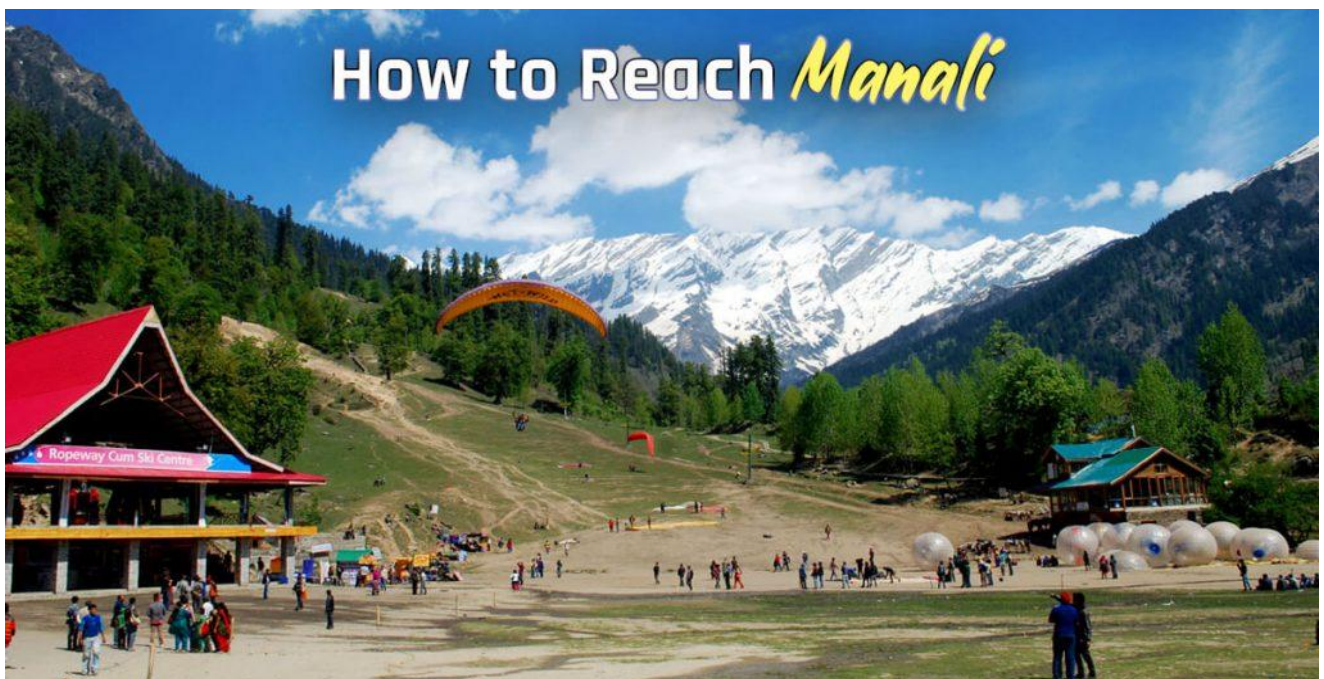
MATHEMATICAL LITERACY GROUP- CHANDIGARH

TRIP

TO



MANALI



Manali is a beautiful hill station in Northern India with lavish green woodlands, stunning views, rambling glades covered with blooms and a never-ending fantasy like fog noticeable all around. It is situated at the bank of river Beas at a height of 1,926 m above the sea level. It beckons to the soul of adventurers and nature lovers and is frequently visited by thousands of tourists.

To travel from delhi to manali, there are many options to opt from the network of buses, trains and flights that serves one's comfort.




- By Bus: Volvo leaves from Delhi at about 5.30 pm and reaches Manali at about 8.00 am.
- By train: There is no direct train from Delhi to Manali. One has to reach Chandigarh Railway Station and then book a cab or a bus to reach Manali.
- By air: One can go from Delhi to Bhuntar via flight and then from Bhuntar, there is about 90 minutes drive to Manali.

For those who prefer travelling by train, a compiled list of ten trains from Delhi to Kalka is given below:



Train Number	Train Name	Departure Time	Arrival Time	Duration	Operational Days	Fare (in INR)
12005	Kalka Shatabdi	17:15	21:20	04:05	All days	CC- INR 640, EC- INR 1155
12011	Kalka Shatabdi	07:40	11:45	04:05	All days	CC- INR 755, EC- INR 1190
14095	Himalyan Queen	05:35	11:10	05:35	All days	2S- INR 110, CC- INR 405
12925	Paschim Express	11:05	16:45	5:40	All days	Sleeper- INR 215, 3A – INR 545, 2A –INR 755
12311	Hwh Dli Kik Mail	21:30	04:35	07:05	All days	Sleeper – INR 205, 3A – INR 550, 2A – INR 780, 1A- INR 1300
22455	Snsi Kik Sup Express	07:50	12:20	04:30	Wed, Sun	Sleeper – INR 230, 3A – INR 540, 2A – INR 745
12057	Uhl Janshatabdi	14:35	19:05	04:30	All days	N/A
13008	U A Toofan Express	07:00	05:00	10:00	All days	N/A
12449	Goa Smprk K Express	18:25	23:45	05:20	Wed, Thu	Sleeper – INR 200, 3A – INR 495, 2A – INR 680, 1A- INR 1135
14217	Unchahar Express	04:25	9:50	05:25	All days	Sleeper – INR 165, 3A – INR 450, 2A- INR 635

A group of 4 friends plan to leave on Saturday to visit Manali. Three friends live in Delhi and one in Ambala Cantt. They want to travel by train from Delhi to Chandigarh and take a 4 days and 3 nights package from Chandigarh to Manali from the following packages:

 <p>Manali tour package from Chandigarh 2 Nights 3 Days by Car</p> <p>₹5,072 ₹4,509</p>	 <p>Manali tour package from Chandigarh 3 Nights 4 Days by Car</p> <p>₹6,422 ₹5,709</p>	 <p>Manali tour package from Chandigarh 4 Nights 5 Days by Car</p> <p>₹7,772 ₹6,909</p>
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Study the tables above and answer the following questions:

1. Which is the best suited train to travel from Delhi to Chandigarh, if their package from Chandigarh starts at 12:30 pm?
2. What is the discount offered on the package?

They chose to travel by 12011 New Delhi Kalka Shatabdi Express Train. Three friends from Delhi boarded the train to Chandigarh. One friend has to join them from Ambala Railway Station. But he reaches the Ambala Cantt. Junction at 10:32 am and misses the train. So, he decides to book a cab and reach Chandigarh Railway Station at the same time as the arrival of the train but the distance by road is 10 Km more than the distance by train. Study the following table to answer the questions:

12011 New Delhi Kalka Shatabdi Express Train Schedule

Day 1

0	Starting station NDLS - New Delhi Railway Station	Arrival ---	Halt ---	Departure 07:40 AM	Distance 0 KM	PL 2
0	PNP - Panipat Junction	Arrival 08:51 AM	Halt 2m	Departure 08:53 AM	Distance 86 KM	PL 3
0	KKDE - Kurukshetra Junction	Arrival 09:37 AM	Halt 2m	Departure 09:39 AM	Distance 151 KM	PL 1
0	UMB - Ambala Cantt. Junction	Arrival 10:28 AM	Halt 2m	Departure 10:30 AM	Distance 192 KM	PL 1
0	CDG - Chandigarh Railway Station	Arrival 11:05 AM	Halt 8m	Departure 11:13 AM	Distance 232 KM	PL 1
0	End Station KLK - Kalka Railway Station	Arrival 11:45 AM	Halt ---	Departure ---	Distance 245 KM	PL 3

1. At what speed should the cab run to reach Chandigarh station in time, if he starts at 10:35am?
2. How much do they have to pay in total for the package?
3. After spending 4 days and 3 nights, they plan to extend their trip by one more day. How much extra do they have to pay in total?
4. Let us suppose that their car covered the distance from Chandigarh to Manali at a uniform speed. If the car were 7.5 Km/hr slower, it would have taken 2 hours more than the scheduled time and if the car would have been 12.5 Km/hr faster, it would have taken 2 hours less than the scheduled time. Find the original speed of the car, the time taken by car to reach Manali and the distance between Chandigarh and Manali.

ANSWER KEY

1. 12011 Kalka Shatabadi as it reaches at 11:45 am and takes less time.
2. 11.1 %
3. Distance = $232 - 192 + 10 = 50$ Km., Time = 11:05 am - 10:35am = 30 minutes = $\frac{1}{2}$ hour,
Speed = 100 Km/hr.
4. $5709 \times 4 = \text{₹ } 22836$
5. $(6909 - 5709) \times 4 = \text{₹ } 4800$
6. Speed = 37.5 Km/hr., Time = 8 hours, Distance = $37.5 \times 8 = 300$ Km.