Subtraction of Time

Understanding the Topic

- Subtraction of time means finding the difference between two times.
- We subtract hours and minutes separately just like we subtract numbers.

Steps to Subtract Time

- Subtract minutes first
- If minutes in the top number are less, borrow 1 hour (60 minutes)
- Subtract hours after adjusting
- Write the final answer in hours and minutes

Important Tips

- Always check if borrowing is needed
- Write time in proper format with units
- Use column method to avoid mistakes

Let us understand with an example:

Example: Subtract 3hrs 45 min 30 sec from 8 hrs 35 min 20 sec

Solution:	hours	minutes	seconds
	8 7	<i>,35 ,3</i> 4 (34+60 = 94)	20 (60 + 20 = 80)
	- 3	45	30
	4	49	50

Explanation:

Step 1: As in seconds column 20 is smaller than 30, we cannot subtract 30 from 20. So, 1 min is borrowed from the minute column and we are left with 34 minutes in minute column.

Now, 1 min = 60 sec, this means 60 sec + 20 sec = 80 sec

We have 80 sec and we can subtract 30 sec from 80 sec.

80 sec - 30 sec = 50 sec

Step 2: As in minutes column 34 is smaller than 45, we cannot subtract 45 from 34. So, 1 hr is borrowed from the hours column and we are left with 7 hrs in hours column.

Now, 1 hour = 60 min, this means 60 min + 34 min = 94 min

We have 94 min and we can subtract 45 min from 94 min.

94 min – 45 min = 49 min

Step 3: Now subtract 3 hrs from 7 hrs.

i.e., 7 – 3 = 4hrs

Example – Borrowing Required (Moderate)

Question: Subtract 3 hours 50 minutes from 6 hours 20 minutes

Solution: Minutes: $20 - 50 \rightarrow$ borrow 1 hour = 60 minutes

Now: 80 - 50 = 30 minutes

Hours: 5 - 3 = 2

Answer: 2 hours 30 minutes

Example – Real-life Use (Moderate)

Question: A train journey started at 6:15 AM and ended at 9:45 AM How long was the journey

Solution: Minutes: 45 – 15 = 30

Hours: 9 - 6 = 3

Answer: 3 hours 30 minutes

Example – Mixed Subtraction (Moderate)

Question: Subtract 1 hour 45 minutes from 4 hours 10 minutes

Solution: Minutes: $10 - 45 \rightarrow$ borrow 1 hour = 60 minutes

Now: 70 – 45 = 25 minutes

Hours: 3 - 1 = 2

Answer: 2 hours 25 minutes

Summary Points

- Subtract minutes first then hours.
- Borrow 1 hour (60 minutes) if top minutes are smaller.

- Final answer should be in hours and minutes.
- Check carefully if borrowing is required.
- Use subtraction in daily routines like travel time and schedules.
- Always label units clearly.
- Helps build time management skills.
- Practice improves speed and understanding.
- Use column subtraction for clarity.
- Time subtraction is used in real-world situations often.