

Name: _____

A Bit More on Time

Sometimes, you know how long something lasts (the time interval) and you know either the start time or the end time, but not both. How do you find the missing time?

Examples:

You go over to a friend's house at 9:40 AM on Saturday morning and stay for 4 hr. 50 minutes. When do you leave?

The easiest way to work this kind of problem is to first add on the hours to the start time and then add on the minutes.

We want to add 4 hours to 9:40 AM. Adding 3 hours will get us to 12:40 PM. Another hour will get us to 1:40 PM.

Now, we'll add on 50 minutes to 1:40 PM.

We'll first add enough minutes to get us to the nearest hour and then add the rest.

Adding 20 minutes to 1:40 gets us to 2:00 PM.

We still have another 30 minutes to add—that brings us to 2:30 PM.

You leave your friend's house at **2:30 PM**.

You and your friends go to a soccer game. You get to the stadium at 1:20 PM. The ticket agent tells you that the game started 1 hr. 30 min. ago. What time did the game start?

Let's first subtract off the hours. Then we'll take away the minutes.

It's now 1:20 PM. So, 1 hour earlier it would have been 12:20 PM.

Now, we need to go back 30 minutes from 12:20 PM.

We first go back 20 minutes. This puts us at 12:00 noon.

We still need to go back another 10 minutes from 12 noon.

This gives us **11:50 AM** as the start time for the game.

1. If it is now 3:20 PM, what time was it 5 hours ago?
2. If it is now 11:15 AM, what time will it be 2 hours from now?

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3. If it is now 9:45 AM, what time will it be 25 minutes from now?

4. If it is now 12 noon, what time was it 50 minutes ago?

5. If you leave to walk the dog at 2:45 PM and are gone for 45 minutes, when will you get back home?

6. You are waiting for your mother to pick you up from school. She calls at 2:45 and says that she will be there in 25 minutes. At what time will your mother arrive to get you?

7. You must be home 1 hour after school ends. If school is over at 2:00 PM and it is now 2:39 PM, how many minutes before you need to be home?

8. School starts at 7:55 AM. The cafeteria opens for breakfast 40 minutes before school starts. What time does the cafeteria open?