Name: _____   **More on Time**

Elapsed time and time intervals:

Elapsed time is time that's passed. It is the **time interval** (length of time) between a start time and an end time.

When you figure out how long something takes or how long you spent doing something, you are calculating a time interval. How do you do it?
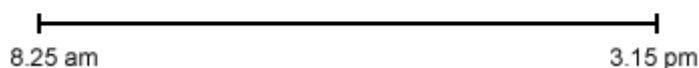
One way is to use a time line.

Here's an example:

You sister starts school at 8:25 AM and finishes at 3:15 PM. How long does her school day last?
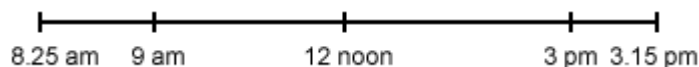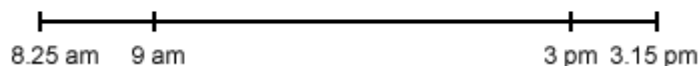
First, we are going to figure out the minutes from the start to the next hour. Next, we will count by hours (from start to noon and from noon until the hour right before the end). Then, we will add the remaining minutes until the end.

Here's how we do it:

Draw a line with 8:25 AM (when your sister started school) at one end and 3:15 PM (when she finished school) at the other.

8.25 am   3.15 pm

The next hour after 8:25 AM is 9:00 AM and the hour right before 3:15 PM is 3:00 PM. Mark 9:00 AM and 3:00 PM on the line.
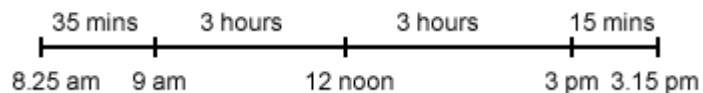

8.25 am   9 am   3 pm 3.15 pm

Mark in 12 noon.

8.25 am   9 am   12 noon   3 pm 3.15 pm

Now calculate the time interval for each section.

35 mins	3 hours	3 hours	15 mins

8.25 am   9 am   12 noon   3 pm 3.15 pm

Add them up: 35 min. + 3 hrs. + 3 hrs. + 15 min. = 6 hrs. 50 min.

Let's do it again—this time without the time line:

You sister starts school at 8:25 AM and finishes at 3:15 PM. How long does her school day last?

Here's what to do:

Begin at 8:25 AM and work out the number of minutes until 9 AM.

8:25 AM to 8:30 AM is 5 minutes and 8:30 AM to 9:00 AM is another 30 min. That gives **35 minutes**.

Next work out how many hours there are between 9 AM and 3 PM.

9 AM to 12 noon is 3 hrs.

12 noon to 3 PM is another 3 hrs.

That's **6 hours**.

Next calculate the number of minutes between 3:00 PM and 3:15 PM.

3:00 PM to 3:15 PM is **15 minutes**.

Finally, add up the separate time intervals.

35 minutes + **6 hours** + **15 minutes** = **6 hrs. 50 min.**

Okay, let's do another one:

You were at the library from 10:08 AM until 12: 57 PM. How long were you there?

52 minutes from 10:08 AM to 11:00 AM.

1 hour from 11:00 AM until 12 noon.

57 minutes from 12 noon until 12:57 PM.

Add up the intervals: 52 min. + 1 hr. + 57 min. = **1 hr. 109 min.**

Of course, 1 hr. 109 min. is a silly answer. Let's change it to something nicer.

60 minutes is one hour. So, 109 minutes = 60 min. + 49 min. = 1 hr. and 49 min.

Now we have: 1 hr. + 109 min. = 1 hr. + (1 hr. + 49 min.) = **2 hr. 49 min.**

The total time you spent at the library was **2 hrs. 49 min.**

YOUR TURN—Draw a timeline if it helps:

1. You get on the bus at 9:55 AM and reach your stop at 10:30 AM. How long was your bus ride?

2. The trax schedule says that the train to Ogden leaves downtown Salt Lake at 11:55 AM and arrives in Ogden at 1:15 PM. How long is the train trip from Salt Lake to Ogden?

3. A movie you want to see starts at 8.10 PM and finishes at 9.50 PM. How long does it last?

4. You left to go visit your friend at 2:30 PM and got back at 5:15 PM. How long were you gone?