Name: _____ Date: _____

Reading a Bus Timetable After Midnight

Circle group

Many bus and train schedules use 24-hour time. They do not write 3:40 in the afternoon. They write 15:40. The day starts at 00:00, which is midnight. It ends at 23:59. You do not need a.m. or p.m., because each time of day has its own number.

Changing the time is simple. In the morning, the numbers are the same as on the clock you know. So 07:45 is 7:45 a.m. In the afternoon and evening, subtract 12 from the hour. 18:10 is 6:10 p.m. Noon is 12:00. The time just after midnight is 00:30. That is 12:30 a.m.

Timetables help you find elapsed time. That is how much time passes from a start to an end. Say a bus leaves at 13:15 and arrives at 14:05. From 13:15 to 14:00 is 45 minutes. From 14:00 to 14:05 is 5 more. The trip takes 50 minutes.

A trip that crosses midnight is tricky. A night bus leaves at 23:30 and arrives at 00:20. The time is not negative. Count 30 minutes to midnight. Then count 20 more. The ride is 50 minutes. Break a trip at the nearest hour or at midnight. Then add the parts.

Questions

1. What time does a 24-hour clock use for midnight?

_____

_____

2. What is 18:10 on the clock you know?

_____

_____

3. What is elapsed time?

_____

_____

4. How long is the trip from 13:15 to 14:05?

_____

_____

5. Why do you not need a.m. and p.m. with this clock?

_____

_____

6. Why is the trip from 23:30 to 00:20 tricky?

_____

_____

Words to know

timetable: a list that shows when buses or trains come and go
elapsed: passed by, as time does
midnight: twelve o'clock at night

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Reading a Bus Timetable After Midnight

Triangle group

Many bus and train schedules print their times in a 24-hour format, so instead of writing 3:40 in the afternoon, the timetable lists 15:40. The system begins at 00:00, which is midnight, and runs up to 23:59, one minute before the next midnight. Because every time of day has its own number, riders do not need the labels a.m. and p.m. to avoid confusion.

Converting to the clock you already know is simple. For the morning hours, the numbers match, so 07:45 means 7:45 a.m. For the afternoon and evening, you subtract 12 from the hour, which turns 18:10 into 6:10 p.m. Noon appears as 12:00, and the first half hour after midnight appears as 00:30, which is the same as 12:30 a.m.

Timetables are most useful for finding elapsed time, the amount of time that passes between a start and an end. If a bus leaves at 13:15 and arrives at 14:05, you can count the minutes in two steps. From 13:15 to 14:00 is 45 minutes, and from 14:00 to 14:05 is 5 more minutes, so the trip takes 50 minutes.

The tricky case comes when a trip crosses midnight. A night bus that leaves at 23:30 and arrives at 00:20 does not take a negative amount of time. Count 30 minutes to reach midnight and then 20 more minutes after it, which makes the ride 50 minutes long. A dependable habit is to break any trip at the nearest hour, or at midnight, and then add the pieces together.

Questions

1. What time does a 24-hour clock use for midnight?

_____

_____

2. What is 18:10 in the usual clock time?

_____

_____

3. What is elapsed time?

_____

_____

4. How long is the trip from 13:15 to 14:05?

_____

_____

5. Why does the system not need a.m. and p.m.?

_____

_____

6. Why is a trip from 23:30 to 00:20 tricky to figure out?

_____

_____

Words to know

timetable: a list that shows when buses or trains come and go
format: the way something is arranged or written
converting: changing from one form to another
elapsed: passed by, as time does
midnight: twelve o'clock at night

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Reading a Bus Timetable After Midnight

Square group

A great many bus and train schedules print their times in a 24-hour format. Rather than writing 3:40 in the afternoon, the timetable lists 15:40. The system begins at 00:00, which marks midnight, and continues until 23:59, one minute before the following midnight. Because every time of day receives its own distinct number, riders no longer need the labels a.m. and p.m. to avoid confusion.

Converting between the two systems is straightforward. During the morning hours, the numbers match the ordinary clock, so 07:45 simply means 7:45 a.m. For the afternoon and evening, you subtract 12 from the hour, which turns 18:10 into 6:10 p.m. Noon appears as 12:00, and the first half hour after midnight appears as 00:30, which is the same as 12:30 a.m.

Timetables are especially valuable for calculating elapsed time, the length of time that passes between a beginning and an end. If a bus departs at 13:15 and arrives at 14:05, you can count the minutes in two stages. The stretch from 13:15 to 14:00 lasts 45 minutes, and the stretch from 14:00 to 14:05 adds 5 more, so the journey takes 50 minutes.

The trickiest situation occurs when a trip crosses midnight. A night bus that departs at 23:30 and arrives at 00:20 certainly does not take a negative amount of time. Count 30 minutes to reach midnight and then 20 additional minutes after it, and the ride lasts 50 minutes. A dependable habit is to split any journey at the nearest hour, or at midnight, and then add the pieces together.

Questions

1. Which time does a 24-hour clock use to mark midnight?

_____

_____

2. How would 18:10 be written on the ordinary twelve-hour clock?

_____

_____

3. How does the passage define elapsed time?

_____

_____

4. How long does the journey from 13:15 to 14:05 take?

_____

_____

5. Why do riders not need the labels a.m. and p.m. with this system?

_____

_____

6. What makes a trip from 23:30 to 00:20 more difficult to figure out?

_____

_____

Words to know

timetable: a list that shows when buses or trains come and go
format: the way something is arranged or written
converting: changing from one form to another
elapsed: passed by, as time does
midnight: twelve o'clock at night

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Reading a Bus Timetable After Midnight

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Reading a Bus Timetable After Midnight

Easier · 175 words · Flesch-Kincaid grade 1.3

1. 00:00.
2. 6:10 p.m.
3. How much time passes from a start to an end.
4. 50 minutes.
5. Each time of day has its own number, so it cannot be mixed up.
6. It crosses midnight, so you cannot just subtract.

Triangle: Reading a Bus Timetable After Midnight

This passage · 231 words · Flesch-Kincaid grade 6.7

1. 00:00.
2. 6:10 p.m.
3. The amount of time that passes between a start and an end.
4. 50 minutes.
5. Every time of day has its own number, so nothing can be confused.
6. It crosses midnight, so you cannot simply subtract the smaller number.

Square: Reading a Bus Timetable After Midnight

Harder · 237 words · Flesch-Kincaid grade 8.1

1. 00:00.
2. 6:10 p.m.
3. The length of time that passes between a beginning and an end.
4. 50 minutes.
5. Every time of day receives its own distinct number, so there is no confusion.
6. It crosses midnight, so simply subtracting the smaller number does not work.