

Max's Magnificent Mastery of Time

Learning objective: To read, write and convert time between analogue and digital 12-hour and 24-hour clocks, and calculate durations.

Read the questions carefully. Some require you to convert between formats, while others ask you to calculate the time elapsed during Max the monkey's adventures.

Max starts his math puzzle at 09:15. If he finishes at 10:05, what is the duration of his work in minutes?

50 minutes.

Write 4:30 PM as it appears on a 24-hour digital clock.

16:30.

If an analogue clock shows the long hand at 6 and the short hand between 3 and 4, what time is it?

Half past 3 (or 03:30).

How many minutes are there in 2 and a half hours?

150 minutes.

Explain why 12:00 at night is written as 00:00 on a 24-hour clock.

Because it marks the very beginning of a new day, starting the 24-hour cycle at zero.

Max catches a train at 14:45. How many hours and minutes is this after midday?

2 hours and 45 minutes.

Compare and contrast the 12-hour clock and the 24-hour clock. Which do you think is less likely to cause confusion for airline pilots?

The 12-hour clock uses AM/PM, while the 24-hour clock counts continuously to 24:00. The 24-hour clock is better for pilots as it eliminates ambiguity between morning and evening.

If it is currently 21:20, how many minutes remain until midnight?

160 minutes (or 2 hours and 40 minutes).

Justify your answer: Is 08:00 in the morning the same as 08:00 in the evening on a 24-hour clock?

No. 08:00 is 8 am, while 08:00 in the evening is 20:00.

What might happen if a digital clock was set to AM/PM mode but the PM indicator was broken?

It would be impossible to distinguish between morning and night, potentially leading to missed appointments or confusion between midday and midnight.

Max spends £4.50 on a book. He starts reading at 15:15 and stops at 17:00. How long did he read for?

1 hour and 45 minutes.

Calculate the difference between 07:50 and 13:10 in hours and minutes.

5 hours and 20 minutes.