

GRADE 8

TIME, CALENDARS & TIME ZONES

Complete Worksheet Pack

6 Practice Worksheets • 6 Answer Keys

Worksheet 1 — Advanced Time Calculations

Month	Days
January	31
February	28 or 29
March	31
April	30
May	31
June	30

1. A film starts at 6:45 p.m. and lasts 2 hours 38 minutes. What time does it finish?
2. A train leaves at 9:48 a.m. and arrives at 2:17 p.m. Find the journey time.
3. A meeting begins at 11:35 a.m. and lasts 1 hour 55 minutes. Find the finishing time.
4. A digital timer shows 3 hours 42 minutes remaining. After 1 hour 58 minutes, how much time remains?
5. A student studies from 4:35 p.m. to 6:20 p.m., then again from 7:05 p.m. to 8:15 p.m. Find the total study time.
6. Convert 2.75 hours into hours and minutes.
7. Challenge: A journey has three stages lasting 48 minutes, 1 hour 37 minutes and 56 minutes, with a 25-minute stop between stages. Find the total elapsed time.

Worksheet 2 — Calendars, Dates & Intervals

1. How many days are there from 14 March to 2 April, excluding 14 March?
2. A project begins on 18 May and lasts 45 days. On what date does it finish if the starting day is Day 1?
3. A library book is borrowed on 27 August for 21 days. What is the due date?
4. How many days are there in a leap year?
5. A school term starts on 3 September and ends on 18 October. How many calendar days are included, counting both dates?
6. A birthday falls on 29 February in a leap year. Explain what makes this date unusual.
7. Challenge: A 90-day challenge starts on 15 January in a non-leap year. What is the date of Day 90?

Worksheet 3 — Time Zones

City	Time zone Reference Time Zones	UTC offset
London	GMT / UTC	UTC +0
Dubai	GST	UTC +4
New Delhi	IST	UTC +5:30
Singapore	SGT	UTC +8
Tokyo	JST	UTC +9

1. If it is 12:00 noon in London (UTC +0), what time is it in New Delhi (UTC +5:30)?
2. If it is 8:00 p.m. in New Delhi, what time is it in Dubai (UTC +4)?
3. If it is 9:30 a.m. in Singapore (UTC +8), what time is it in London?
4. A video call begins at 7:00 p.m. in New Delhi. What time is it in Tokyo (UTC +9)?
5. A flight leaves New Delhi at 11:30 p.m. and lasts 5 hours 30 minutes. If the destination is Dubai, what is the local arrival time using the stated UTC offsets?
6. Explain why the same instant can have different clock times in different cities.
7. Challenge: A live online class is scheduled for 18:00 UTC. Find the local start time in Dubai, New Delhi, Singapore and Tokyo.

Worksheet 4 — International Travel & Elapsed Time

1. A flight leaves New Delhi at 9:40 p.m. and lasts 8 hours 15 minutes. Find the arrival time in UTC+0, ignoring any seasonal clock changes.
2. A flight leaves London at 10:30 a.m. and reaches New Delhi after 9 hours 20 minutes. Using UTC+5:30 for New Delhi, find the local arrival time.
3. A traveller has a 2-hour 15-minute layover. Their first flight arrives at 4:35 p.m. What time does the next flight depart?
4. A journey begins Tuesday at 11:20 p.m. and ends Wednesday at 6:15 a.m. Find the elapsed time.
5. A flight crosses a time-zone boundary. Explain why local arrival time cannot be found from duration alone.
6. A traveller schedules a 90-minute online meeting at 14:30 in New Delhi. What are the start and end times in Tokyo?
7. Challenge: A webinar is 75 minutes long and starts at 23:15 UTC. Find the ending time in New Delhi.

Worksheet 5 — Timetables & Scheduling

1. A bus timetable lists departures at 07:25, 08:10, 08:55 and 09:40. What is the interval between consecutive buses?
2. A train journey takes 2 hours 45 minutes. If the train leaves at 13:35, when does it arrive?
3. A student needs 35 minutes to travel to school and must arrive by 8:20 a.m. What is the latest departure time?
4. Three activities last 45, 55 and 40 minutes, with 10-minute breaks between them. Starting at 9:15 a.m., when does the final activity finish?
5. A timetable shows two buses arriving at 14:05 and 14:47. How long does a passenger wait if they arrive at 14:12?
6. Explain why a timetable may need different schedules on weekdays and weekends.
7. Challenge: Design a morning schedule from 7:00 to 9:00 containing breakfast, preparation and travel, with at least 15 minutes of buffer time.

Worksheet 6 — Time Zones & Calendar Challenge

1. An international competition begins at 16:00 UTC and lasts 2 hours 45 minutes. Find the local finishing time in New Delhi and Tokyo.
2. A flight leaves New Delhi on 12 June at 22:40 and lasts 7 hours 20 minutes. Find the arrival date and UTC time.
3. A project deadline is 18:00 in New Delhi. A team member in London submits at the same instant. What is the London clock time?
4. A conference occurs every Monday for 8 weeks, beginning 6 April. List the dates of all eight sessions.
5. A person sleeps from 10:45 p.m. to 6:20 a.m. Find the total sleep duration.
6. A 30-day subscription starts on 17 November. What is the date of Day 30?
7. Challenge: A virtual meeting is scheduled for 9:30 a.m. New Delhi time. A participant says it is 4:00 a.m. in their city. What UTC offset would their city have under this simplified fixed-offset model?

Answer Key 1 — Advanced Time Calculations

1. 9:23 p.m.
2. 4 hours 29 minutes.
3. 1:30 p.m.
4. 1 hour 44 minutes.
5. 2 hours 55 minutes.
6. 2 hours 45 minutes.
7. 4 hours 46 minutes.

Answer Key 2 — Calendars, Dates & Intervals

1. 19 days.
2. 1 July, counting 18 May as Day 1.
3. 17 September.
4. 366 days.
5. 46 days.
6. It occurs only in leap years because February normally has 28 days.
7. 15 April.

Answer Key 3 — Time Zones

1. 5:30 p.m.
2. 6:30 p.m.
3. 1:30 a.m.
4. 11:00 p.m.
5. 11:30 p.m. New Delhi = 6:00 p.m. UTC; after 5 h 30 min = 11:30 p.m. UTC; Dubai = 3:30 a.m. next day.
6. Time zones assign different local clock times to the same instant.
7. Dubai 10:00 p.m.; New Delhi 11:30 p.m.; Singapore 2:00 a.m. next day; Tokyo 1:00 a.m. next day.

Answer Key 4 — International Travel & Elapsed Time

1. 5:55 a.m. UTC the next day.
2. 3:20 a.m. next day in New Delhi.
3. 6:50 p.m.
4. 6 hours 55 minutes.
5. Local arrival also depends on the destination time zone and any clock changes.
6. Tokyo is one hour ahead of New Delhi in the stated offsets, so 14:30–16:00 New Delhi corresponds to 15:30–17:00 Tokyo.
7. 00:30 UTC next day; in New Delhi = 6:00 a.m.

Answer Key 5 — Timetables & Scheduling

1. 45 minutes.
2. 4:20 p.m.
3. 7:45 a.m.
4. Finish at 11:55 a.m.
5. 35 minutes.
6. Travel demand and operating patterns can differ between weekdays and weekends.
7. Answers vary; schedule must fit within 7:00–9:00 and include at least 15 minutes of buffer.

Answer Key 6 — Time Zones & Calendar Challenge

1. New Delhi finishes at 12:15 a.m. next day; Tokyo finishes at 3:45 a.m. next day.
2. 22:40 New Delhi = 17:10 UTC; +7 h 20 min = 00:30 UTC on 13 June.
3. London = 12:30 p.m. under the stated offsets.
4. 6 Apr, 13 Apr, 20 Apr, 27 Apr, 4 May, 11 May, 18 May, 25 May.
5. 7 hours 35 minutes.
6. 16 December.
7. UTC−1:00? Correction: New Delhi is UTC+5:30, so 4:00 a.m. is 5 hours 30 minutes behind it: UTC−0:00.