

GRADE 6 MATHEMATICS

ADVANCED TIME, CALENDARS & TIME ZONES

Complete printable worksheet pack

Advanced time calculations • complex elapsed time • journey planning • time zones • calendars • reasoning

Worksheet 1: Advanced Time Calculations

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. Convert: (a) 3 h 45 min = ____ min (b) 245 min = ____ h ____ min (c) 2 h 18 min 35 s = ____ s.
2. Calculate: 4 h 35 min + 2 h 48 min.
3. Calculate: 7 h 10 min – 3 h 45 min.
4. How many seconds are there in 3 minutes 45 seconds?
5. A machine runs for 2 h 35 min each day for 4 days. What is the total running time?
6. A student studies 1 h 25 min in the morning and 2 h 10 min in the evening. How long does she study altogether?
7. A digital timer shows 1 h 05 min 40 s remaining. After 28 min 55 s, how much time remains?
8. Challenge: A project takes 6 h 40 min in total. Three stages take 1 h 35 min, 2 h 20 min and 1 h 15 min. How much time is left for the final stage?

Answer Key — 1: Advanced Time Calculations

1. 225 min; 4 h 5 min; 8,315 s.
2. 7 h 23 min.
3. 3 h 25 min.
4. 225 s.
5. 10 h 20 min.
6. 3 h 35 min.
7. 36 min 45 s.
8. 1 h 30 min.

Teacher note: Accept equivalent correct methods and clearly shown working.

Worksheet 2: Complex Elapsed Time

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. Find the elapsed time from 21:35 to 00:20 the next day.
2. A train leaves at 23:48 and arrives at 05:17 the next day. Find the journey time.
3. An event begins at 08:45 and finishes at 16:20, including two breaks of 25 minutes each. Find the actual activity time.
4. A study plan starts at 17:35. Study lasts 55 min, break 15 min, study 1 h 20 min, break 10 min, study 45 min. What time does it finish?
5. A flight leaves at 18:55 and lasts 7 h 35 min. What is the arrival time?
6. A worker is scheduled for 8 h 30 min and takes a 45-minute break. If work begins at 07:40, what time does the workday end?
7. An examination lasts 2 h 15 min. Students must arrive 35 minutes before the exam. If the exam starts at 09:10, when should students arrive?
8. Challenge: A journey has three driving sections of 1 h 25 min, 2 h 10 min and 55 min, with two 20-minute stops. It begins at 06:45. When does it finish?

Answer Key — 2: Complex Elapsed Time

1. 2 h 45 min.
2. 5 h 29 min.
3. 6 h 45 min.
4. 21:00.
5. 02:30 next day.
6. 16:55.
7. 08:35.
8. 12:55.

Teacher note: Accept equivalent correct methods and clearly shown working.

Worksheet 3: Schedules & Journey Planning

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. A train leaves at 07:25 and reaches Station B at 09:05. A connecting train leaves at 09:32 and reaches Station C at 11:18. Find the total journey time including the connection.
2. A bus arrives every 18 minutes starting at 06:12. Write the next five arrival times.
3. A traveller must reach an airport by 16:40. The train takes 1 h 35 min, the airport transfer takes 25 min, and security/check-in takes 55 min. What is the latest train departure time?
4. A timetable gives two routes: Route A takes 2 h 15 min with a 20-minute wait; Route B takes 1 h 50 min with a 45-minute wait. Which route has the shorter total time? By how much?
5. A school trip leaves at 08:15. Travel takes 1 h 20 min. The group stays 2 h 35 min and then travels home for 1 h 10 min. What time do they return?
6. A train scheduled for 13:40 is delayed by 35 minutes. The journey lasts 2 h 25 min. What is the new arrival time?
7. A traveller has a 50-minute connection between trains. The first train arrives at 14:18 and the second departs at 15:02. How much connection time is available, and is it enough?
8. Challenge: A family needs 15 min to walk to a station, 1 h 12 min on Train A, 28 min waiting, 55 min on Train B and 10 min to walk to the destination. They must arrive by 12:30. What is the latest time they should leave home?

Answer Key — 3: Schedules & Journey Planning

1. 3 h 53 min.
2. 06:12, 06:30, 06:48, 07:06, 07:24.
3. 13:45.
4. Route B; 5 min shorter.
5. 13:20.
6. 16:40.
7. 44 min; yes.
8. 09:30.

Teacher note: Accept equivalent correct methods and clearly shown working.

Worksheet 4: Time Zones

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. City A is 3 hours ahead of City B. If it is 14:30 in City B, what time is it in City A?
2. City X is 5 hours behind City Y. If it is 21:15 in City Y, what time is it in City X?
3. A flight leaves City A at 22:40. City B is 2 hours ahead. The flight takes 7 h 20 min. What is the local arrival time in City B?
4. A video call starts at 18:00 in a city that is 4 hours behind your city. What time is it for you?
5. City P is 6 hours ahead of City Q. A meeting is at 09:30 in P. What time is it in Q?
6. A flight departs at 16:25 local time and takes 9 h 10 min. The destination is 3 hours behind the departure city. What is the local arrival time?
7. A traveller leaves a city at 23:15 for a 5 h 50 min flight. The destination is 4 hours ahead. What is the local arrival time?
8. Challenge: A webinar starts at 20:30 in City A. City B is 5 h 30 min behind A, while City C is 2 h ahead of A. Find the start time in B and C.

Answer Key — 4: Time Zones

1. 17:30.
2. 16:15.
3. 08:00 next day.
4. 22:00.
5. 03:30.
6. 22:35.
7. 09:05 next day.
8. B = 15:00; C = 22:30.

Teacher note: Accept equivalent correct methods and clearly shown working.

Worksheet 5: Calendars, Dates & Leap Years

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. How many days are there from 12 March to 27 March, not counting 12 March itself?
2. A project begins on 18 April and lasts 24 days. On what date does it finish if the starting day is Day 1?
3. How many days are there in February in a leap year?
4. Is 2032 a leap year? Give a reason using the leap-year rule.
5. A library book is borrowed on 26 November and returned on 9 December. How many days later is it returned?
6. If 1 January is a Monday, what day of the week is 15 January?
7. A 10-week course starts on Tuesday 6 May. On what date is the final day of the course?
8. Challenge: A school term starts on 3 September and lasts 8 weeks. There is a 1-week holiday after Week 4. How many calendar weeks pass from the start to the end of Week 8, including the holiday?

Answer Key — 5: Calendars, Dates & Leap Years

1. 15 days.
2. 11 May.
3. 29 days.
4. Yes; divisible by 4 and not a century year.
5. 13 days.
6. Monday.
7. 14 July.
8. 9 calendar weeks.

Teacher note: Accept equivalent correct methods and clearly shown working.

Worksheet 6: Time Reasoning Challenge

Show your working clearly. Use 24-hour time where it makes calculations easier.

1. A clock loses 3 minutes every hour. It is correct at 09:00. What will it show at 15:00?
2. A timer is 8 minutes fast. It shows 17:42. What is the actual time?
3. Two trains leave at 08:35 and 09:20. Train A takes 2 h 15 min; Train B takes 1 h 50 min. Which arrives first, and at what time?
4. A meeting lasts 1 h 45 min. Three people arrive 12 min early, 7 min late and exactly on time. If the meeting ends at 15:30, when did it start?
5. A 24-hour timetable has departures every 55 minutes beginning at 05:40. What is the first departure after 10:00?
6. A student has 4 h 30 min available. She spends 1 h 15 min on homework, 45 min on exercise, 50 min on reading and 35 min on chores. How much free time remains?
7. A flight leaves at 23:35 and lasts 8 h 40 min. The destination is 1 h 30 min behind the departure city. What is the local arrival time?
8. Challenge: A journey must finish by 18:00. It includes 1 h 35 min driving, a 25 min stop, 2 h 10 min driving, a 15 min stop and 50 min driving. What is the latest departure time?

Answer Key — 6: Time Reasoning Challenge

1. 14:42.
2. 17:34.
3. Train B, 11:10.
4. 13:45.
5. 10:35.
6. 1 h 05 min.
7. 06:45 next day.
8. 12:45.

Teacher note: Accept equivalent correct methods and clearly shown working.