

WA7MMGN1

Non-spatial measurement

Core + Challenge

Australian Time Zones

I can convert times between Australian time zones, including daylight saving, and solve travel and scheduling problems.

Name: _____ Date: _____ Score: _____ / 59

Key idea

Australia has three standard time zones. Perth is **2 h behind** Sydney, Melbourne, Brisbane and Hobart, and **1 h 30 min behind** Adelaide and Darwin.

Daylight saving (early October to early April): SA, NSW, ACT, Vic and Tas move clocks **forward 1 h**. WA, NT and Qld do not change.

So in summer Perth is **3 h behind** Sydney and **2 h 30 min behind** Adelaide, but still 2 h behind Brisbane.

Travel: find the arrival time in the departure city's time first, then convert to local time at the destination.

A Fluency *practise the skill*

/ 16 marks

Use the table. 'DS' means during daylight saving. 1 mark each.

State or territory	Standard time	Daylight saving (Oct – Apr)
WA (Perth)	AWST UTC+8	no change
NT (Darwin)	ACST UTC+9:30	no change
SA (Adelaide)	ACST UTC+9:30	ACDT UTC+10:30
Qld (Brisbane)	AEST UTC+10	no change
NSW, ACT, Vic, Tas	AEST UTC+10	AEDT UTC+11

1. 9:00 am in Perth → Sydney _____ 9. 1:00 am in Brisbane → Perth _____

2. 3:00 pm in Perth → Brisbane _____ 10. Write 14:20 in 12-hour time _____

3. 10:00 am in Perth → Adelaide _____ 11. Write 7:45 pm in 24-hour time _____

4. 2:30 pm in Perth → Darwin _____ 12. DS: 6:00 pm in Perth → Sydney _____

5. 8:00 pm in Sydney → Perth _____ 13. DS: 5:00 pm in Adelaide → Perth _____

6. 12:15 pm in Adelaide → Perth _____ 14. DS: 10:00 am in Brisbane → Sydney _____

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7. 7:00 am in Melbourne → Adelaide _____
15. Time difference Perth–Adelaide (standard) _____
8. 11:00 pm in Perth → Hobart _____
16. Time from 8:45 am to 2:10 pm _____

B**Core** *apply the skill to problems*

/ 23 marks

- 1 An AFL match starts at 7:30 pm in Melbourne (standard time). What time does it start in Perth? [2 marks]

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Answer: _____

- 2 A flight leaves Perth at 6:00 am (Perth time) and takes 4 hours. What is the local time in Sydney when it lands (a) in June (b) in December? [3 marks]

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Answer: _____

- 3 A flight leaves Sydney at 5:30 pm (standard time) and takes 5 h 20 min. What is the local time in Perth when it lands? [3 marks]

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Answer: _____

- 4 Nana in Brisbane rings at 8:00 pm her time. What time is it in Perth? Does the answer change in summer? [2 marks]

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Answer: _____

- 5 A TV show starts at 8:30 pm in Adelaide (standard time). What time is it in Darwin and in Perth? [2 marks]

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Answer: _____

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- 6 An online test opens at 9:00 am AEDT (Sydney, daylight saving). What time does it open in Perth? [2 marks]

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Answer: _____

- 7 Offices in Perth and Sydney are open 9:00 am – 5:00 pm local time (standard time). What is the latest Perth time a 1-hour meeting can start with both offices open? [2 marks]

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Answer: _____

- 8 Sydney's New Year fireworks start at midnight AEDT. What time and date is it in Perth? [2 marks]

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Answer: _____

- 9 A train leaves Sydney on Wednesday at 2:55 pm (AEST) and arrives in Perth on Saturday at 3:00 pm (AWST). How long is the journey? [3 marks]

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Answer: _____

- 10 Perth is UTC+8. London in winter is UTC+0. When it is 4:00 pm in Perth, what time is it in London? [2 marks]

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Answer: _____

C**Reasoning** *explain, justify and check*

/ 9 marks

- 1 Explain why Australia has different time zones. [3 marks]

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- 2 Explain why the time difference between Perth and Sydney is 2 h in winter but 3 h in summer. [2 marks]

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- 3 Tom says, 'Adelaide is 1 hour ahead of Perth.' Is he right? Explain. [2 marks]

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- 4 Why is the time difference between Perth and Brisbane the same all year? [2 marks]

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D**Challenge** *multi-step and problem-solving*

/ 11 marks

- 1 A concert in Sydney starts at 8:00 pm AEDT and runs for 2 h 45 min. A Perth student watches it live. What are the start and finish times in Perth? [2 marks]

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Answer: _____

- 2 In November, a 'red-eye' flight leaves Perth at 11:50 pm and takes 3 h 35 min to reach Melbourne. What is the local time in Melbourne when it lands? [3 marks]

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Answer: _____

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- 3 Friends in Perth, Adelaide and Sydney (standard time) want a video call when it is between 8:00 am and 9:00 pm for everyone. What is the window in Perth time? [3 marks]

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Answer: _____

- 4 A flight leaves Sydney at 7:00 am AEDT and arrives in Perth at 9:35 am AWST. How long is the flight? [3 marks]

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Answer: _____

How did I go?

Fluency ____ / 16 Core ____ / 23 Reasoning ____ / 9 Challenge ____ / 11 **Total ____ / 59**

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