

WA6MMGNS1

Non-spatial measurement

Core + Challenge

Timetables and Duration

I can read 12- and 24-hour times and timetables, and work out how long events and journeys take.

Name: _____ Date: _____ Score: _____ / 57

Key idea

24-hour time always uses 4 digits and no am or pm. For **pm** times (except 12 noon to 12:59 pm), **add 12** to the hour: 5:20 pm = **17:20**.

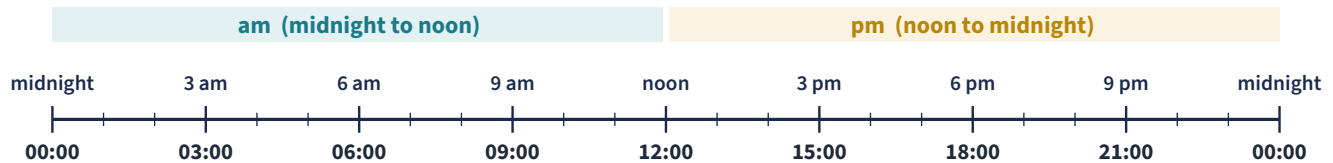
Midnight is **00:00**, so 12:15 am = **00:15**. Morning times keep their hour: 8:05 am = **08:05**.

To find a **duration**, count on in jumps: to the next hour, then whole hours, then the minutes left.

There are **60** minutes in an hour, not 100.

Example: 08:48 to 11:13 is 12 min + 2 h + 13 min = **2 h 25 min**.

One day in 12-hour and 24-hour time



A

Warm up *read, draw and convert times*

/ 16 marks

Write each time in 24-hour time. 1 mark each.

1 A time in the afternoon



2 A time in the morning



3 A time late at night



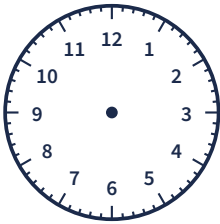
4 A time in the evening



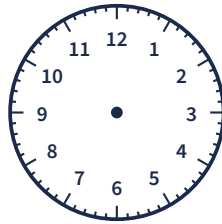
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Draw the hands on each clock. Make the hour hand shorter. 1 mark each.

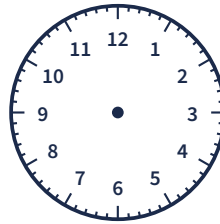
5 Show **14:35**



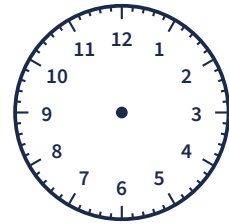
6 Show **07:10**



7 Show **20:55**



8 Show **12:20**



Write each time in the other system (12-hour with am or pm, or 24-hour). 1 mark each.

9 In 24-hour time

4:15 pm

10 In 12-hour time

00:30

11 In 24-hour time

12:45 pm

12 In 12-hour time

19:45

How long is it from the first time to the second? 1 mark each.

13 08:45 to 10:20

14 9:50 am to 1:15 pm

15 22:40 to 01:15

16 11:35 am to 12:10 pm

B Practise *use the skill*

/ 22 marks

- 1 Use the bus timetable. **a)** Zoe gets on at **Harrisdale Central**. She must be at Cockburn Central Station by **8:00 am**. What time is the **latest** bus she can catch? [3 marks]
b) How long does Bus 3 take from Piara Waters to Cockburn Central? **c)** Write the time the **last** bus leaves Piara Waters in 24-hour time.

Bus: Piara Waters to Cockburn Central Station · Weekdays · all times am					
Stop	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5
Piara Waters Shopping Ctr	6:48	7:10	7:25	7:45	8:05
Harrisdale Central	6:55	7:18	7:33	7:53	8:12
Atwell	7:06	7:31	7:47	8:07	8:24
Cockburn Central Stn	7:15	7:41	7:58	8:19	8:34

- a) _____
 b) _____
 c) _____

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- 2 Use the train timetable. **a)** How long does Train 2 take from Mandurah to Elizabeth Quay? **b)** Jack arrives at Murdoch Station at **07:50**. How long must he wait for the next train? **c)** Ava must be at Canning Bridge by **08:10**. Which is the latest train she can catch from Rockingham, and when does it leave?

[3 marks]

Train: Mandurah Line to Perth · Weekdays · 24-hour time				
Station	Train 1	Train 2	Train 3	Train 4
Mandurah	06:52	07:07	07:22	07:37
Rockingham	07:09	07:24	07:39	07:54
Cockburn Central	07:27	07:42	07:57	08:12
Murdoch	07:31	07:46	08:01	08:16
Bull Creek	07:34	07:49	08:04	08:19
Canning Bridge	07:38	07:53	08:08	08:23
Elizabeth Quay	07:45	08:00	08:15	08:30

- a) _____
- b) _____
- c) _____

- 3 The school day runs from **08:30** to **15:00**. Recess is from **10:40** to **11:00** and lunch is from **12:50** to **13:30**. **a)** Shade recess and lunch on the timeline and label them. **b)** How long are the breaks altogether? **c)** How much time is left for learning?

[3 marks]



- b) _____
- c) _____

- 4 Complete the itinerary for the Year 6 excursion to Perth Zoo. Each activity starts when the one before it finishes.

[3 marks]

Activity	Start	Duration	Finish
Bus to Perth Zoo	9:15 am	35 min	
African Savannah walk		1 h 25 min	
Lunch on the lawn			12 noon
Reptile encounter		50 min	

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- 5 A flight leaves Perth at **23:45**. The flight takes **3 h 30 min**. What is the time in Perth when it lands? Write it in 24-hour **and** in 12-hour time. [2 marks]

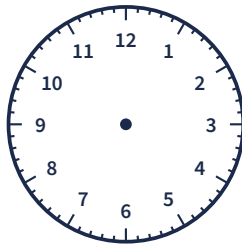
Answer: _____

- 6 A movie starts at the time shown, in the **evening**. It runs for **1 h 55 min**. Draw the hands to show when it finishes, and write the finish time in 24-hour time. [2 marks]

Starts



Finishes



Answer: _____

- 7 A roast chicken must cook for **1 h 45 min** and then rest for **15 min**. Dinner is at **6:30 pm**. What is the **latest** time it can go into the oven? Give the time in 24-hour time. [2 marks]

Answer: _____

- 8 At a netball carnival, each game lasts **12 minutes**, with a **3-minute** break between games. The first game starts at **9:00 am**. When does the **6th** game finish? [2 marks]

Answer: _____

- 9 Draw a line to join each 12-hour time to the **same** time in 24-hour time. [2 marks]

7:05 pm

07:05

12:45 am

22:50

12:45 pm

19:05

7:05 am

00:45

10:50 pm

12:45

C**Think it through** *explain your thinking*

/ 10 marks

- 1 Ryan worked out how long it is from **9:45** to **11:20**. He wrote: $1120 - 945 = 175$, so it is **1 h 75 min**. Do you agree with Ryan? Explain, and find the correct duration. [2 marks]

- 2 **True or false?** “00:45 is 45 minutes **before** midnight.” Explain, and write the time that **is** 45 minutes before midnight in 24-hour time. [2 marks]

- 3 **Always, sometimes or never true?** “An event that starts in the **am** and finishes in the **pm** lasts more than 1 hour.” Give examples. [2 marks]
Always / Sometimes / Never

- 4 Which journey is the **odd one out**? **A** 07:40 to 09:15, **B** 10:50 to 12:25, **C** 23:10 to 00:45, **D** 14:35 to 16:20 Explain. [2 marks]

- 5 Lena says the easiest way to find the time from **07:52** to **10:09** is to **count on** using “friendly” times. Show her strategy with jumps on the time line, and find the duration. [2 marks]



Answer: _____

D**Challenge** *stretch yourself*

/ 9 marks

- 1 Zoe lives near the **Piara Waters** bus stop. She takes the bus to Cockburn Central, then the train to **Bull Creek**. She needs at least **5 minutes** to change from the bus to the train, and must reach Bull Creek by **08:10**. Use both timetables in Practise. **a)** Which is the latest bus she can catch? **b)** How long does she wait at Cockburn Central? **c)** How long is her whole journey? [3 marks]

Answer: _____

- 2 A **palindrome** time reads the same forwards and backwards on a 24-hour clock, like **12:21**. **a)** Find all the palindrome times in one day. How many are there? **b)** How long is it from the **last** palindrome of one day to the **first** of the next day? [3 marks]

Answer: _____

- 3 In Perth on **1 January**, the sun rises at about **5:12 am** and sets at about **7:22 pm**. On **21 June**, it rises at about **7:16 am** and sets at about **5:20 pm**. How much **less** daylight is there on 21 June than on 1 January? [3 marks]

Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 22 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 57**Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**