Reasoning and Problem Solving
Step 3: Analogue to Digital – 12 Hour

National Curriculum Objectives:

Mathematics Year 4: (4M4b) Read, write and convert time between analogue and digital 12- and 24-hour clocks

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Convert between analogue and digital to compare times in order to explain whether a person is late or not. Includes reading and recording time to the nearest 5 minutes.
Expected Convert between analogue and digital to compare times in order to explain whether a person is late or not. Includes reading and recording time to the nearest minute.
Greater Depth Convert between analogue and digital to compare times in order to explain whether a person is late or not. Includes reading and recording time to the nearest minute using a numberless clock face.

Questions 2, 5 and 8 (Problem Solving)
Developing Calculate the earliest and latest times using understanding of am/pm and being able to compare analogue and digital times. Includes reading and recording time to the nearest 5 minutes.
Expected Calculate the earliest and latest times using understanding of am/pm and being able to compare analogue and digital times. Includes reading and recording time to the nearest minute.
Greater Depth Calculate the earliest and latest times using understanding of am/pm and being able to compare analogue and digital times. Includes reading and recording time to the nearest minute using a numberless clock face.

Questions 3, 6 and 9 (Problem Solving)
Developing Use understanding of converting analogue and digital times to calculate the missing hands or digits. Includes reading and recording time to the nearest 5 minutes.
Expected Use understanding of converting analogue and digital times to calculate the missing hands or digits. Includes reading and recording time to the nearest minute.
**Greater Depth** Use understanding of converting analogue and digital times to calculate the missing hands or digits. Includes reading and recording time to the nearest minute using a numberless clock face.

More Year 4 Time Resources.

Did you like this resource? Don't forget to review it on our website.

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1a. Carter arrives at the zoo at the time shown on the analogue clock. He thinks he's on time to watch the sealion show.
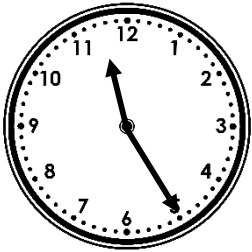
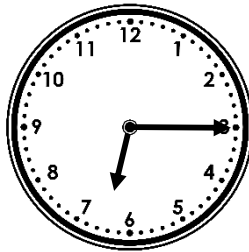| Event	Start Time
Petting zoo	10:45am
Lion feeding	11:10am
Sealion show	11:30am

Is he correct? Explain why.

PS

1b. Maya arrives at the circus at the time shown on the analogue clock. She thinks she's on time to see the acrobats.

Performers	Start Time
Clowns	05:50pm
Acrobats	06:05pm
Trapeze	06:30pm

Is she correct? Explain why.

PS

2a. Which is the earliest and latest time?

am

pm

05:10am

05:05am   10:40pm

10:35pm

pm   am

PS

2b. Which is the earliest and latest time?
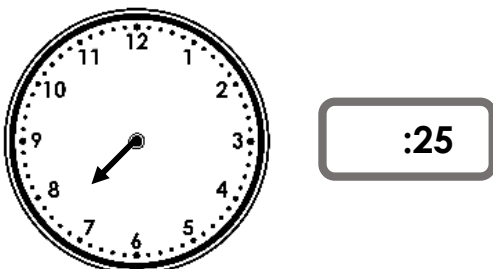
pm

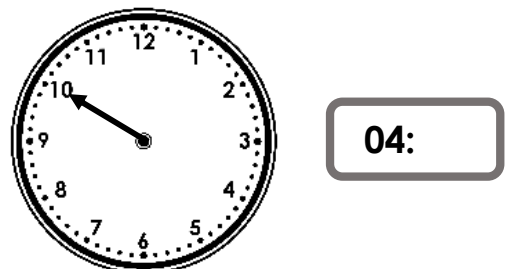03:05am   09:04pm

am

02:55am   09:35pm

am

PS

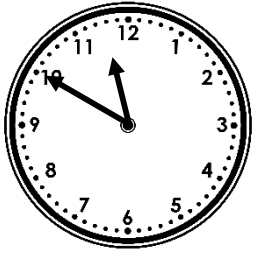**3a.** These clocks both show the same time. What could the missing minute hand and hour be?

:25

R

3b. These clocks both show the same time. What could the missing hour hand and minutes be?

04:

R

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4a. Ryan arrives at the cinema at the time shown on the analogue clock. He thinks he's on time to watch Space Wars.

Film	Start Time
Captain Britain	11:30am
Space Wars	11:46am
Spider Boy	12:07pm

Is he correct? Explain why.

4b. Martha arrives at the Leisure Centre at the time shown on the analogue clock. She thinks she's on time for yoga.
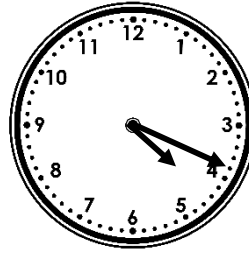
Activity	Start Time
Gymnastics	04:17pm
Trampolining	04:12pm
Yoga	04:22pm

Is she correct? Explain why.

5a. Which is the earliest and latest time?

am

pm

03:19am

11:18am   11:12pm

03:18pm

pm   am

5b. Which is the earliest and latest time?

10:09am   pm   11:14pm

am   pm
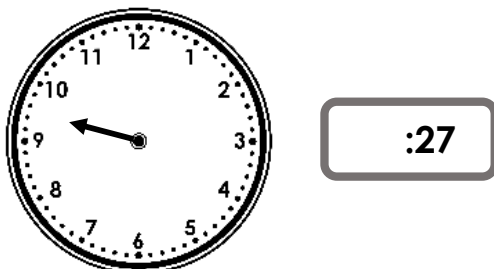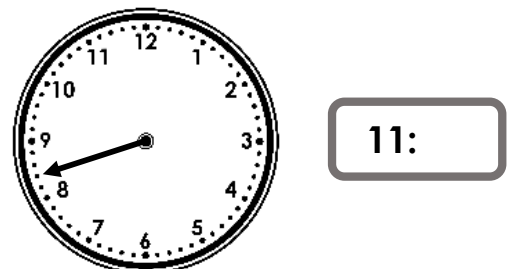
01:27am   10:01pm

am

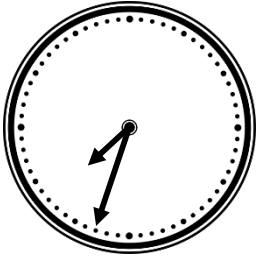**6a.** These clocks both show the same time. What could the missing minute hand and hour be?

:27

6b. These clocks both show the same time. What could the missing hour hand and minutes be?

11:

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7a. Louis arrives at the theatre at the time shown on the analogue clock. He thinks he's on time to watch the play.

Act	Start Time
Warm-up act	07:12pm
Play	07:28pm
Interval	08:47pm

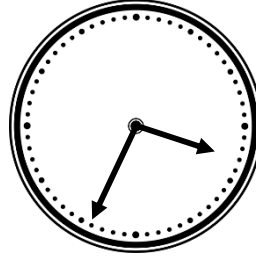**Is he correct? Explain why.**

GD | PS

7b. Lin arrives at the horse show at the time shown on the analogue clock. She thinks she's on time to watch eventing.

Activity	Start Time
Dressage	09:38am
Show jumping	12:22pm
Eventing	03:46pm

Is she correct? Explain why.

GD | PS

8a. Which is the earliest and latest time?

AM

PM

01:04am

01:02am

09:29pm

09:31pm

PM

AM

GD | PS

8b. Which is the earliest and latest time?

PM

02:17am

11:27pm
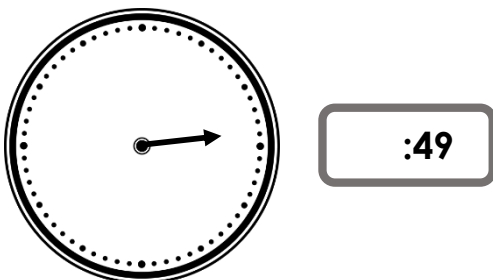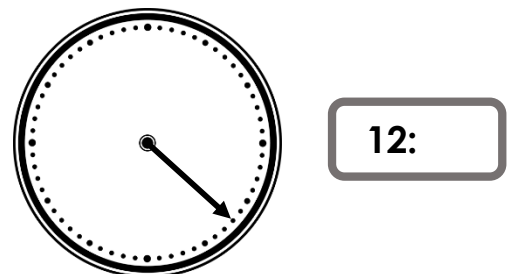
AM

PM

02:03am

10:59pm

AM

GD | PS

9a. These clocks both show the same time. What could the missing minute hand and hour be?

:49

GD | R

9b. These clocks both show the same time. What could the missing hour hand and minutes be?

12:

GD | R

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Reasoning and Problem Solving – Analogue to Digital – 12 Hour – Year 4 Greater Depth

Developing

1a. Carter is on time to watch the sealion show, as he is 5 minutes early.

2a. 05:05am is the earliest time. 10:45pm is the latest time.

3a.

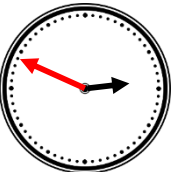

07:25

Expected

4a. Ryan is not on time to watch Space Wars as he is 4 minutes late.

5a. 02:45am is the earliest time. 11:50pm is the latest time.

6a.

09:27

Greater Depth

7a. Louis is not in time for the play as he is 5 minutes late.

8a. 01:01am is the earliest time. 09:36pm is the latest time.
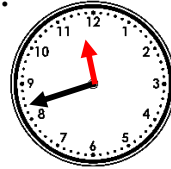
9a.

02 :49

Developing

1b. Maya is not on time for the acrobats as she is 10 minutes late.

2b. 02:55am is the earliest time. 09:55pm is the latest time.
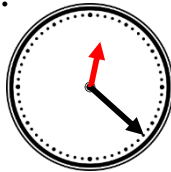
3b.

04:50

Expected

4b. Martha is on time for yoga as she is 3 minutes early.

5b. 01:20am is the earliest time. 11:15pm is the latest time.

6b.

11:42

Greater Depth

7b. Lin is on time for the eventing as she is 12 minutes early.

8b. 02:03am is the earliest time. 11:54pm is the latest time.

9b.

12:22