

Unit 11

Strengthen activities

MISCONCEPTION: Children may mix up the roles of the hour and minute hands. They think '10 to' means the hour hand points to the number 10.

Answers

- At 10 o'clock the hour hand is on the 10, minute hand on the 12. The hour hand shows how many hours and the minute hand shows how many minutes.
- At half past two the hour hand is between the 2 and 3, minute hand on the 6.

At 4 o'clock the hour hand is on the 4, minute hand on the 12. At quarter to six, the hour hand is between the 5 and 6, minute hand on the 9.

MISCONCEPTION: Children may think that digital clock numbers are the same as analogue clock numbers, for example 3:10 means the hour hand points to the 3, and the minute hand points to the 10.

Answers

- At 3 pm the hour hand is on the 3, minute hand on the 12. This is the same at 3 am.
 - On analogue, the hour hand shows hours and the minute hands shows the number of minutes past/to the hour. On digital, the first digits show the hour and the second digits show the minutes past the hour. The first digits on a digital clock indicate whether it is am or pm.
 - At 08:50 the hour hand is between 8 and 9, and the minute hand is at 10. When the hour hand points just past 7 and the minute hand points to the 2 a digital clock would show 07:10 or 19:10.
- 2:40 on digital, hour hand between 2 and 3, minute hand on 8, 6:15 on digital, hour hand between 6 and 7, minute hand on 3, 0:00 on digital, hour hand and minute hand on 12.

MISCONCEPTION: Children may incorrectly add the number of minutes each time when working out durations, for example, if the start time is '12 minutes to 4' and the duration is 10 minutes, they add 10 to 12 and get the end time of '22 minutes to 4'. Some are unsure how to find durations when they cross the hour boundary.

Answers

11:27

Deepen activities

Answers

Activity 1

- The lesson is $\frac{3}{4}$ of the hour, the break is $\frac{1}{4}$ of the hour.
- There are 5×45 minutes = 225 minutes of lessons each day and 5×15 minutes + 60 minutes = 135 minutes of breaks each day.

Activity 2

$$\begin{aligned} \frac{1}{2} \text{ of a day} &= \mathbf{12 \text{ hours}} & \frac{1}{8} \text{ of a day} &= \mathbf{3 \text{ hours}} \\ \frac{1}{4} \text{ of an hour} &= \mathbf{15 \text{ mins}} & \frac{2}{6} \text{ of a day} &= \mathbf{8 \text{ hours}} \\ \frac{2}{4} \text{ of a day} &= \mathbf{12 \text{ hours}} & \frac{3}{10} \text{ of an hour} &= \mathbf{18 \text{ mins}} \\ \frac{2}{3} \text{ of an hour} &= \mathbf{40 \text{ mins}} \end{aligned}$$

Children should create further examples for their partner.

Activity 3

Depart	Arrival	Journey time
06:50	11:30	4 hrs 40 min
10:15	12:40	2 hrs 25 min
11:42	12:18	36 min
12:35	14:10	1 hr 35 min
16:39	19:59	3 hrs 20 min
18:21	23:00	4 hrs 39 min

Check children have added journeys to the timetable that meet the criteria.