

# Year 4, Week 1, 23.3.20

Maths No Problem workbook, Chapter 7, Lesson 3-6, mind workout and review, Pages 188 – 198.

# Changing Time in Hours to Minutes

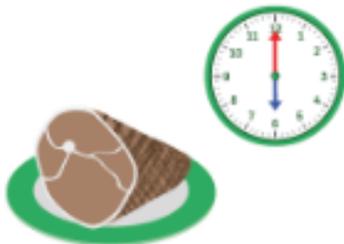
## Lesson 3

### In Focus

Mr. Smith took  $1\frac{1}{2}$  hours to roast some beef.



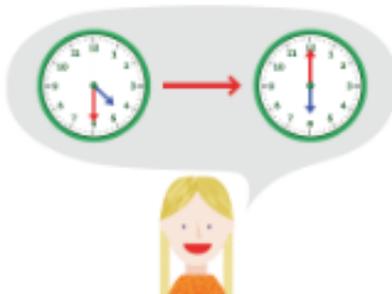
It's well done.



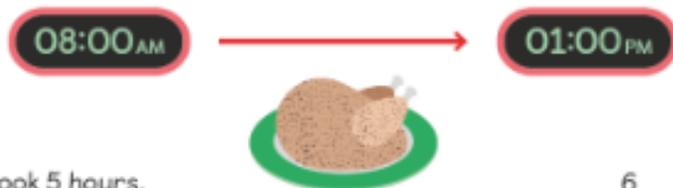
How many minutes did it take?

### Let's Learn

- 1 hour = 60 minutes  
 $\frac{1}{2}$  hour = 30 minutes  
 $1\frac{1}{2}$  hours = 90 minutes



- 2 How long was the cooking time in minutes?



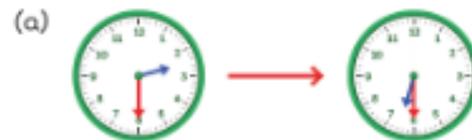
It took 5 hours.

$$\begin{aligned} 1 \text{ h} &= 60 \text{ min} \\ 5 \text{ h} &= 5 \times 60 \text{ min} \\ &= 300 \text{ min} \end{aligned}$$

$$\begin{array}{r} \phantom{0} 6 \phantom{0} \\ \times \phantom{0} 5 \\ \hline \phantom{0} \phantom{0} 0 \\ \phantom{0} \phantom{0} 0 \\ \hline \phantom{0} \phantom{0} 0 \end{array}$$

### Guided Practice

- 1 How many minutes have passed?



- 2 There are 24 hours in a day.  
How many minutes are there in a day?

$$\begin{aligned} 1 \text{ h} &= \phantom{00} \text{ min} \\ 10 \text{ h} &= \phantom{00} \text{ min} \\ 24 \text{ h} &= \phantom{00} \text{ min} \end{aligned}$$

- 3 Holly took 1 h 15 min to prepare an apple pie that serves 8 people.  
She baked it for 55 min.  
How long was the preparation time?

$$\begin{aligned} 1 \text{ h} &= \phantom{00} \text{ min} \\ 1 \text{ h } 15 \text{ min} &= \phantom{00} \text{ min} \end{aligned}$$

# Solving Problems on Duration of Time

## In Focus



Emma arrived at the mall at **13:35** and spent some time shopping before leaving.

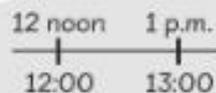
At what time did Emma leave the mall?

## Let's Learn

1

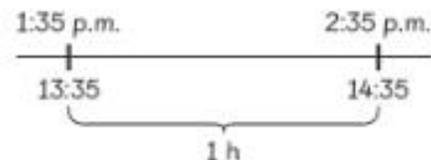


13:00 is 1 p.m.  
13:35 is 1:35 p.m.  
She arrived at 1:35 in the afternoon.



2

What if she spent 1 h shopping before leaving?



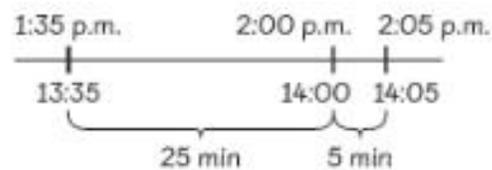
She left at 14:35.

2:35 p.m.



3

What if she spent 30 min shopping before leaving?



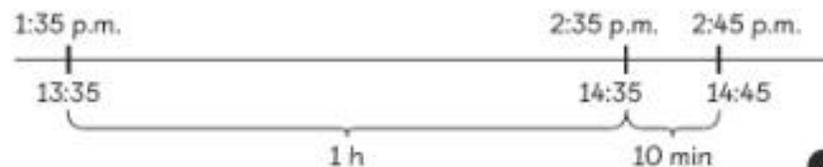
She left at 14:05.

2:05 p.m.



4

What if she spent 1 h 10 min shopping before leaving?



She left at 14:45.

2:45 p.m.



## Guided Practice

1

Charles left his house at 09:55.  
He returned home at 12:25.  
How long was he away from home?

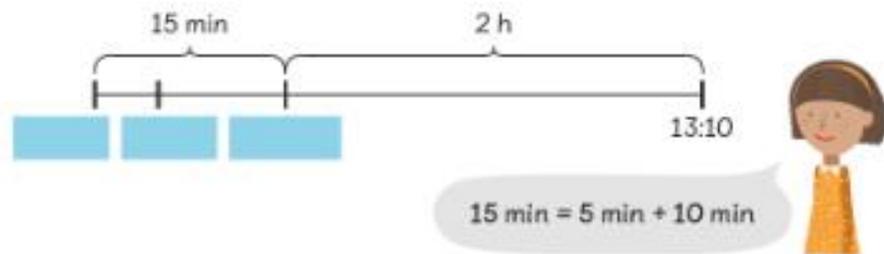


He was away from home for .

How many minutes is that?



- 2 Amira spent 2 h 15 min at a carnival.  
She left the carnival at 13:10.  
At what time did she arrive at the carnival?



She arrived at the carnival at  a.m.

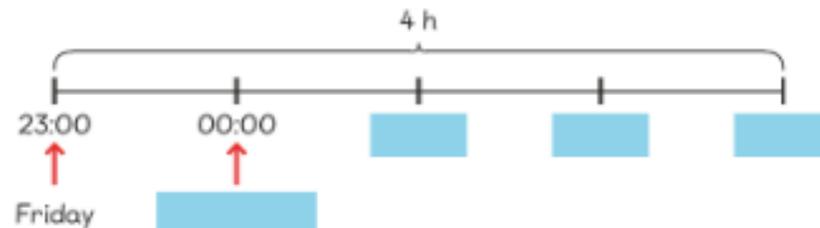
- 3 Holly and her family took a flight from Liverpool to Paris.  
The flight departed 40 min after boarding time.  
The flight was 1 h 30 min long.  
At what time did they reach Paris?

SkyAirlines		Boarding Pass		
Boarding Time	Date	From		
16:30	04	Liverpool John Lennon	789PA SKY	
		To		
		Passenger	Seat	
		Holly Wilson	11a	
Gates close 15 minutes before departure				



Holly and her family reached Paris at  p.m.

- 4 Sam took a coach from Manchester to London.  
He boarded the coach at 23:00 on Friday and the coach ride was 4 h long.  
When did he arrive in London?



He arrived in London at  a.m. on .

# Changing Years to Months and Weeks to Days

## Lesson 5

### In Focus

Average Lifespan			
 rooster	 rabbit	 sheep	 lion
15 years	9 years	180 months	168 months

According to a website, these are the average lifespans of the four animals. Compare them.

### Let's Learn

- 1  rabbit
- 1 year = 12 months  
9 years =  $9 \times 12$  months  
= 108 months

$$\begin{array}{r} 12 \\ \times 9 \\ \hline 108 \end{array}$$

Alternatively,  
 $9 \times 12 = 120 - 12$



The lifespan of a  is shorter than that of a  and a .

2



rooster

1 year = 12 months  
10 years = 120 months  
5 years = 60 months  
15 years = 120 months + 60 months  
= 180 months

The lifespan of a  is the same as that of a  but is longer than that of a .

3

Did you know that, on average, male ants live for 3 weeks while houseflies live for 4 weeks?



How many days are there in 3 weeks?  
1 week = 7 days  
3 weeks =  $3 \times 7$  days  
= 21 days

June						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					



How many days are there in 4 weeks?  
4 weeks =  $4 \times 7$  days  
= 28 days

June						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

## Guided Practice

- 1 Some animals with short average lifespans are shown.

 guinea pig	4 years
 mosquito fish	2 years
 chameleon	1 year

- (a) What is the average lifespan of a  in months?

1 year =  months

- (b) What is the average lifespan of a  in months?

2 years =  ×  months

Alternatively,

months +  months

- (c) What is the average lifespan of a  in months?

4 years =  ×  months

Alternatively,

12 → 24 →

- 2 Ruby observed the eggs of a monarch butterfly for several weeks. Her notebook page is shown below.

2 April Eggs were laid.

9 April The eggs hatched!

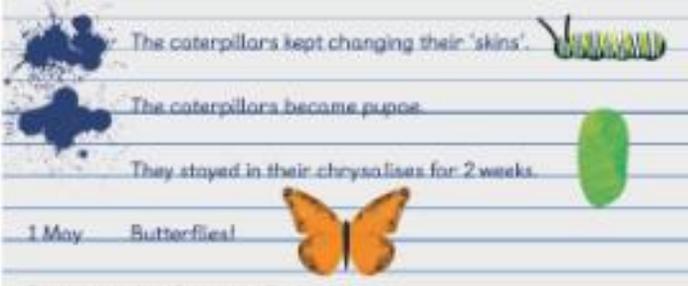
The caterpillars kept changing their 'skins'.

The caterpillars became pupae.

They stayed in their chrysalises for 2 weeks.

1 May Butterflies!

I hear they live for about 5 months.



- (a) The eggs took 1 week to hatch.

1 week =  days

- (b) The caterpillars stayed in their chrysalises for 2 weeks.

2 weeks =  days

×

- (c) It took the butterflies 4 weeks to transform from eggs to butterflies.

4 weeks =  days

+

- (d) How many weeks does a monarch butterfly usually live?

1 month = 4 weeks

5 months =  weeks

×

# Solving Word Problems

## Lesson 6

### Guided Practice

#### In Focus

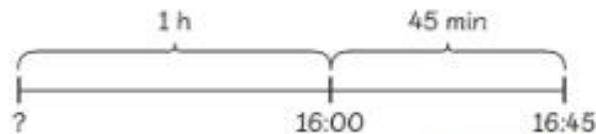


Amira took 25 minutes to finish her homework. She spent another 1 h 20 min watching television. She then left the house. At what time did Amira start doing her homework?

#### Let's Learn

$$25 \text{ min} + 1 \text{ h } 20 \text{ min} = ?$$

+ 20 min      + 1 h  
25 min → 45 min → 1 h 45 min



Amira started doing her homework at [ ] .

Time

Page 277

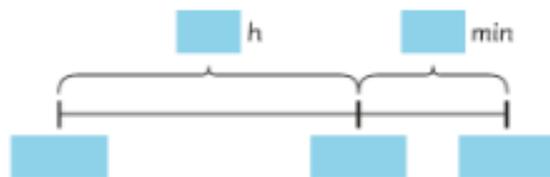
- 1 Holly and Lulu went to the shopping centre at 10:10. They spent 1 h 45 min shopping before going for lunch. They finished their lunch at 13:15. How long did they take to finish lunch?



First, find the time they went for lunch.



Holly and Lulu went for lunch at [ ] .



Then, find how long they took for lunch.



They took [ ] h [ ] min to finish lunch.

- 2 It took 6 h 45 min to travel from Town A to Town B by train. A train left Town A at 23:35. However, the train was delayed by 30 minutes. When did the train reach Town B?

#### Method 1

Without delay

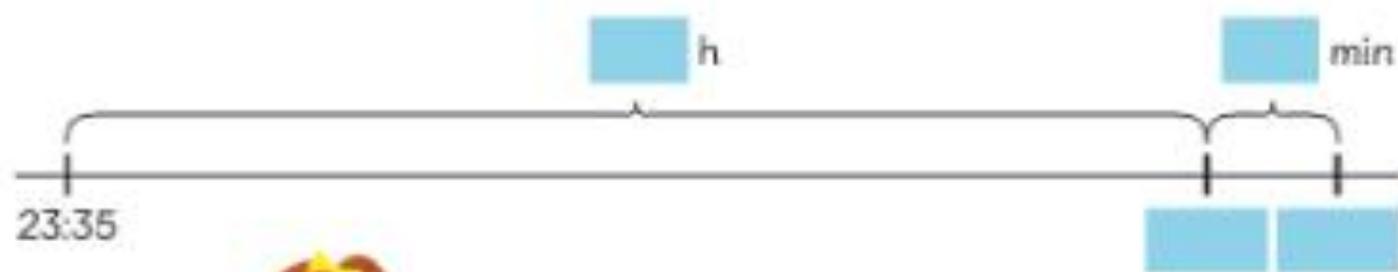
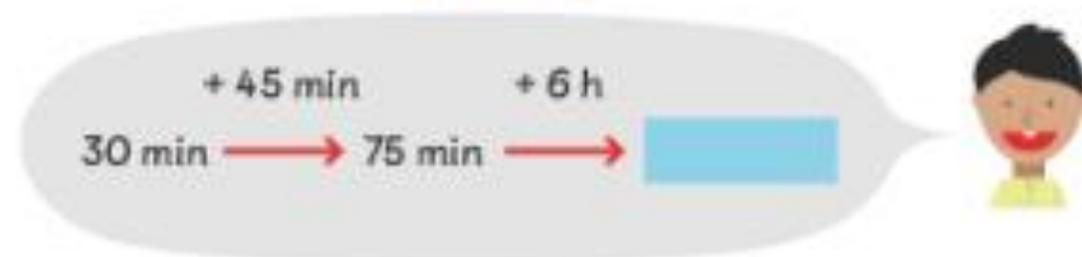


Time

Page 278

Method 2  
With delay

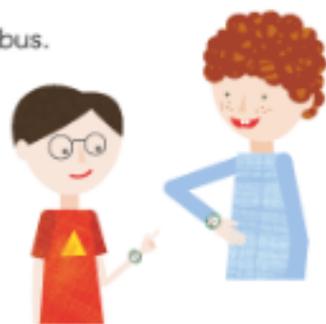
$$6 \text{ h } 45 \text{ min} + 30 \text{ min} = \boxed{\phantom{00}}$$



Did the train arrive on  
the same day it departed?

## Mind Workout

Elliott has a watch that loses 2 minutes every hour.  
Charles has a watch that gains 1 minute every hour.  
They both set their watches at 6:00 a.m. and got on a bus.  
When they got off the bus, the times on their watches  
were 15 minutes apart.  
At what time did they get off the bus?



Time

Page 279

## Maths Journal

The website shows some information on various flights from Singapore to other countries.

<http://www.resairline.com/>

Country	Departure Time	Arrival Time
Hong Kong	23:45	03:30
Perth	02:55	08:10
Shanghai	08:50	14:00
Kuala Lumpur	19:45	20:50
Taipei	19:35	00:15

Using this information, create a word problem for your classmates to solve.

### I know how to...

- tell time using the 24-hour clock.
- change time in minutes to seconds.
- change time in hours to minutes.
- change time in years to months.
- change time in months to years.
- find the duration, starting time and finishing time.
- solve word problems on time.

Self Check

Time

Page 280

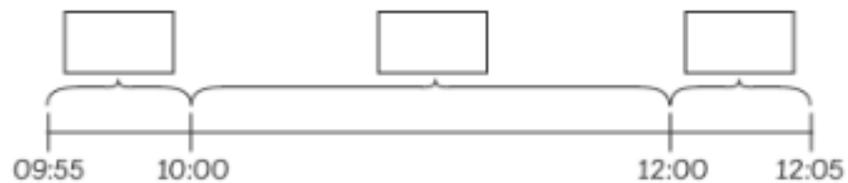
## Review 7

1 Fill in the blanks.

- (a) 5 minutes =  seconds
- (b) 10 minutes 15 seconds =  seconds
- (c) 4 hours =  minutes
- (d)  $\frac{1}{2}$  hour =  minutes
- (e) 6 hours 10 minutes =  minutes

Solve.

- 2 Hannah started her piano lesson at 09:55.  
Her lesson ended at 12:05.  
How long was her piano lesson?



Her piano lesson was  long.