

## Bronze

- 1a. 360 seconds = 6 minutes;  
600 seconds = 10 minutes  
2a. False: 28 days > 3 weeks  
3a. A  
4a. 60 minutes, 2 hours, 180 minutes, 4 hours

- 1b. 48 months < 5 years  
2b. Yes, Zairah is correct. There are 60 seconds in 1 minute.  $3 \times 60 = 180$  so there are 180 seconds in 3 minutes.  
3b. Leticia has the longest nap at 240 minutes.

## Silver

- 5a. 132 minutes = 2 hours 12 minutes;  
90 minutes = 1 hour 30 minutes;  
188 minutes = 3 hours 8 minutes  
6a. False: 4 years 6 months = 54 months  
7a. A  
8a. 610 seconds, 10 minutes 20 seconds, 10 minutes 30 seconds, 650 seconds

- 4b. 55 months < 66 months = 5 years 6 months  
55 months < 5 years 6 months = 66 months  
5b. No, Ravi is incorrect. There are 24 hours in 1 day therefore Lily is going to the beach in 1 day and 11 hours.  $3 \times 24 = 72$  and  $72 + 5 = 77$  so 3 days and 5 hours = 77 hours.  
6b. Aamina finishes the race last as she takes 270 seconds.

## Gold

- 9a. 3,600 seconds = 1 hour; 1,800 seconds = 0.5 hours; 5,400 seconds = 1.5 hours; 2,700 seconds = 0.75 hours  
10a. True  
11a. A  
12a. 0.75 hours, 4,500 seconds, 98 minutes, 100 minutes, 6,060 seconds, 2.5 hours

- 7b. Various possible answers: for example, 192 hours = 8 days > 1,440 minutes < 7 days  
8 days = 192 hours > 1,440 minutes < 7 days  
1,440 minutes < 192 hours = 8 days > 7 days  
7 days > 1,440 minutes < 192 hours = 8 days  
8b. Yes, Oscar is correct. There are 60 minutes in 1 hour.  $3 \times 60 = 180$ . There are 60 seconds per minute so  $180 \times 60 = 10,800$   
9b. Lexi has trained for the shortest time as 156 weeks = 3 years.

## Challenge

1. Mary wants to book a holiday in May. She needs to be back at home for work by the 27<sup>th</sup> May at 08:30 at the latest. Investigate which holidays she could book. Which is the longest holiday she can book?

Destination	Departure Time	Duration
Italy	9 <sup>th</sup> May 13:50	17.5 days
Turkey	10 <sup>th</sup> May 09:45	200 hours
Greece	9 <sup>th</sup> May 20:45	2 $\frac{1}{2}$ weeks
Morocco	11 <sup>th</sup> May 11:35	480 hours
Spain	13 <sup>th</sup> May 02:50	21 days 8 hours
France	19 <sup>th</sup> May 21:00	175 hours



Various possible answers, for example: She could book Italy as she would be back on 27<sup>th</sup> May 01:50. She could not book Greece as she would be back on 27<sup>th</sup> May 08:45. Her boss changes his mind and says that she can come back to work a week later. Which is the longest holiday she can go for now?

A week later would be 3<sup>rd</sup> June so she could now go to Morocco as she would be back on 31<sup>st</sup> May at 11:35 but not to Spain as she would be back on 3<sup>rd</sup> June at 10:50.

2. Explore and discuss the statements below.



Brad

By your 10<sup>th</sup> birthday, you will always be 3,650 days old.



Mae

6 months is 180 days.



Sue

I am 12 years old but I have only had 3 birthdays.



Who do you agree or disagree with? Explain why.

Various possible answers, for example:

I disagree with Brad as he hasn't counted the extra day during the leap years.

I disagree with Mae as the months have a different number of days and there are not 6 consecutive months that add up to exactly 180 days.

I agree with Sue as if she was born on the 29<sup>th</sup> February, which happens once every 4 years, she would only have 3 birthdays.