

## Reasoning and Problem Solving Converting Units of Time

### Developing

- 1a. 300 seconds > 4 minutes  
2a. No, Mia is incorrect. There are 7 days in 1 week.  $70 \div 7 = 10$  so 70 days = 10 weeks.  $7 \times 7 = 49$  so 7 weeks = 49 days.  
3a. Lee is the youngest at 84 months.

### Expected

- 4a. 72 minutes > 3,780 seconds < 3,900 seconds  
3,780 seconds < 72 minutes > 3,900 seconds  
3,900 seconds < 72 minutes > 3,780 seconds  
3,900 seconds > 3,780 seconds < 72 minutes  
5a. No, Joe is incorrect. There are 7 days in 1 week.  $13 \times 7 = 91$  so 91 days = 13 weeks. 80 days = 11 weeks, 3 days  
6a. Chloe makes her craft the quickest, in 1 hour and 55 minutes

### Greater Depth

- 7a. Various possible answers: for example, 1.75 hours = 105 minutes < 9,000 seconds > 2 hours  
105 minutes = 1.75 hours < 9,000 seconds > 2 hours  
9,000 seconds > 1.75 hours = 105 minutes < 2 hours  
2 hours > 1.75 hours = 105 minutes < 9,000 seconds  
8a. Yes, Ellie is correct. There are 52 weeks in 1 year and  $4 \times 52 = 208$   
9a. Ellis is going on the shortest holiday as he is only away for 10 days.

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### Developing

- 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.

### Expected

- 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.

### Greater Depth

- 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.