



# Time Problems Involving Minutes and Seconds

I can solve problems that involve converting units of time (minutes and seconds).



1. A group of friends run in a cross-country race. Here are their times in minutes and seconds:

Name	Time in Minutes and Seconds	Time in Seconds
Jyoti	3 minutes 10 seconds	
Kayleigh	2 minutes 40 seconds	
Jess	3 minutes 20 seconds	
Pritesh	2 minutes 50 seconds	
Muhammed	3 minutes 40 seconds	

a. Write the friends' names from fastest to slowest:

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b. Convert the times to seconds (write them in the table).

c. How much slower was Jess than Kayleigh? Draw a timeline to help.

d. How much faster was Pritesh than Muhammed? Draw a timeline to help.

2. This table shows how long Georgie swam for each week over a four-week period. Some of the times are in minutes and seconds, some in seconds. Complete the table.

Week	Minutes and Seconds	Seconds
Week 1	4 minutes 10 seconds	
Week 2		190 seconds
Week 3		220 seconds
Week 4	4 minutes 20 seconds	



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1. Here are the times of competitors in a cycling race. Some of their times are recorded in minutes and seconds and some in seconds.

Name	Minutes and Seconds	Seconds
Gregory	5 minutes 35 seconds	
Joseph		355 seconds
Mosam		415 seconds
Laila	4 minutes 55 seconds	
Aliyah		290 seconds
Elijah	5 minutes 15 seconds	

- a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds.

- b. Order the competitors in order from fastest to slowest:

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- c. How much faster was Laila than Gregory? Draw a timeline to help.

- d. How much slower was Mosam than Elijah? Write your answer in minutes and seconds.

- e. How much slower was Gregory than Joseph?



2. Robert runs home from school every day for a week. This table shows how long his run took each day from Monday to Thursday. On Friday, he was 1 and a half minutes faster than his slowest time.

Day	Minutes and Seconds	Seconds
Monday	7 minutes 45 seconds	
Tuesday		400 seconds
Wednesday	7 minutes 25 seconds	
Thursday		455 seconds
Friday		

- a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds. Remember to complete Friday's times, from the information given.
- b. How many seconds slower was Robert's run on Monday compared to Friday?

- c. How many seconds faster was Robert's run on Tuesday compared to Thursday?



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1. At school, a group of friends complete an obstacle course. They complete the course twice. This table shows their times in minutes and seconds and seconds.

Name	First Attempt		Second Attempt	
	Minutes and Seconds	Seconds	Minutes and Seconds	Seconds
Paige		370 seconds	6 minutes 28 seconds	
Alex		334 seconds	5 minutes 24 seconds	
Tanashe		385 seconds		349 seconds
Xavier	5 minutes 52 seconds		6 minutes 14 seconds	
Stephanie		400 seconds	6 minutes 38 seconds	

- a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds.
- b. Calculate the difference between each child's first and second attempt.

Paige	
Alex	
Tanashe	
Xavier	
Stephanie	

- c. Who was the fastest child in attempt 1?

- d. Who was the slowest child in attempt 2?



e. Order the children from fastest to slowest, using their fastest time out of the 2 attempts.

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2. Here are some of the world records for the 400m freestyle swimming event over the last 100 years. Answer the questions and show your working out.


Date	Athlete	Time in Minutes and Seconds
1919	Norman Ross (USA)	5 minutes 15 seconds
1922	Johnny Weissmuller (USA)	5 minutes 7 seconds
1933	Shozo Makino (Japan)	4 minutes 46 seconds
1974	Tim Shaw (USA)	3 minutes 57 seconds
1994	Kieren Peters (Australia)	3 minutes 44 seconds
2012	Yannick Agnel (France)	3 minutes 32 seconds

a. How much faster (in seconds) was the world record set by Yannick Agnel than the one set by Shozo Makino?

b. How much faster (in minutes and seconds) was the world record set by Kieren Peters than the one set by Johnny Weissmuller?

c. How much faster (in seconds) was the world record set by Tim Shaw than the one set by Johnny Weissmuller?

d. How much faster was the world record set by Yannick Agnel than the one set by Norman Ross? Write your answer in seconds and minutes and seconds.



# Time Problems Involving Minutes and Seconds **Answers**

1. A group of friends run in a cross-country race. Here are their times in minutes and seconds:

Name	Time in Minutes and Seconds	Time in Seconds
Jyoti	3 minutes 10 seconds	<b>190 seconds</b>
Kayleigh	2 minutes 40 seconds	<b>160 seconds</b>
Jess	3 minutes 20 seconds	<b>200 seconds</b>
Pritesh	2 minutes 50 seconds	<b>170 seconds</b>
Muhammed	3 minutes 40 seconds	<b>220 seconds</b>

a. Write the friends' names from fastest to slowest:

**Kayleigh, Pritesh, Jyoti, Jess, Muhammed.**

b. Convert the times to seconds (see table).

c. How much slower was Jess than Kayleigh? Draw a timeline to help.

**40 seconds**

d. How much faster was Pritesh than Muhammed? Draw a timeline to help.

**50 seconds**

2. This table shows how long Georgie swam for each week over a four-week period. Some of the times are in minutes and seconds, some in seconds. Complete the table.

Week	Minutes and Seconds	Seconds
Week 1	4 minutes 10 seconds	<b>250 seconds</b>
Week 2	<b>3 minutes 10 seconds</b>	190 seconds
Week 3	<b>3 minutes 40 seconds</b>	220 seconds
Week 4	4 minutes 20 seconds	<b>260 seconds</b>



# Time Problems Involving Minutes and Seconds **Answers**

1. Here are the times of competitors in a cycling race. Some of their times are recorded in minutes and seconds and some in seconds.

Name	Minutes and Seconds	Seconds
Gregory	5 minutes 35 seconds	<b>335 seconds</b>
Joseph	<b>5 minutes 55 seconds</b>	355 seconds
Mosam	<b>6 minutes 55 seconds</b>	415 seconds
Laila	4 minutes 55 seconds	<b>295 seconds</b>
Aliyah	<b>4 minutes 50 seconds</b>	290 seconds
Elijah	5 minutes 15 seconds	<b>315 seconds</b>

- a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds.
- b. Order the competitors in order from fastest to slowest:  
**Aliyah, Laila, Elijah, Gregory, Joseph, Mosam**
- c. How much faster was Laila than Gregory? Draw a timeline to help.  
**40 seconds**
- d. How much slower was Mosam than Elijah? Write your answer in minutes and seconds.  
**1 minute 40 seconds**
- e. How much slower was Gregory than Joseph?  
**20 seconds**

2. a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds. Remember to complete Friday's times, from the information given.

Day	Minutes and Seconds	Seconds
Monday	7 minutes 45 seconds	<b>465 seconds</b>
Tuesday	<b>6 minutes 40 seconds</b>	400 seconds
Wednesday	7 minutes 25 seconds	<b>445 seconds</b>
Thursday	<b>8 minutes 15 seconds</b>	495 seconds
Friday	<b>6 minutes 45 seconds</b>	<b>405 seconds</b>

- b. How many seconds slower was Robert's run on Monday compared to Friday?  
**60 seconds**
- c. How many seconds faster was Robert's run on Tuesday compared to Thursday?  
**95 seconds**



# Time Problems Involving Minutes and Seconds **Answers**

1. a. Complete the table, converting minutes and seconds to seconds and seconds to minutes and seconds.

Name	First Attempt		Second Attempt	
	Minutes and Seconds	Seconds	Minutes and Seconds	Seconds
Paige	<b>6 minutes 10 seconds</b>	370 seconds	6 minutes 28 seconds	<b>388 seconds</b>
Alex	<b>5 minutes 34 seconds</b>	334 seconds	5 minutes 24 seconds	<b>324 seconds</b>
Tanashe	<b>6 minutes 25 seconds</b>	385 seconds	<b>5 minutes 49 seconds</b>	349 seconds
Xavier	5 minutes 52 seconds	<b>352 seconds</b>	6 minutes 14 seconds	<b>374 seconds</b>
Stephanie	<b>6 minutes 40 seconds</b>	400 seconds	6 minutes 38 seconds	<b>398 seconds</b>

b. Calculate the difference between each child's first and second attempt.

Paige	<b>18 seconds</b>
Alex	<b>10 seconds</b>
Tanashe	<b>36 seconds</b>
Xavier	<b>22 seconds</b>
Stephanie	<b>2 seconds</b>

c. Who was the fastest child in attempt 1?

**Alex**

d. Who was the slowest child in attempt 2?

**Stephanie**

e. Order the children from fastest to slowest, using their fastest time out of the 2 attempts.

**Alex, Tanashe, Xavier, Paige, Stephanie**

2. a. How much faster (in seconds) was the world record set by Yannick Agnel than the one set by Shozo Makino?

**74 seconds**

b. How much faster (in minutes and seconds) was the world record set by Kieren Peters than the one set by Johnny Weissmuller?

**1 minute 23 seconds**

c. How much faster (in seconds) was the world record set by Tim Shaw than the one set by Johnny Weissmuller?

**70 seconds**

d. How much faster was the world record set by Yannick Agnel than the one set by Norman Ross? Write your answer in seconds and minutes and seconds.

**103 seconds (1 minute 43 seconds)**