Reasoning and Problem Solving
Step 5: Converting Units of Time

National Curriculum Objectives:

Mathematics Year 5: (5M4) Solve problems involving converting between units of time

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use understanding of units of time and concept of 'greater than', 'equals' and 'less than' to arrange 3 cards into a correct number sentence. Only 1 possible answer. Convert units with no remainders.
Expected Use understanding of units of time and concept of 'greater than', 'equals' and 'less than' to arrange 5 cards into a correct number sentence. Between 2 and 4 possible answers to find. Convert units with remainders.
Greater Depth Use understanding of units of time and concept of 'greater than', 'equals' and 'less than' to arrange 7 cards into a correct number sentence. 8 possible answers to find. Non-direct conversion of units with remainders and decimals.

Questions 2, 5 and 8 (Reasoning)
Developing Convert between different units of time with no remainders to explain who has the correct answer.
Expected Convert between different units of time with remainders to explain who has the correct answer.
Greater Depth Non-direct conversion between different units of time with remainders to explain who has the correct answer.

Questions 3, 6 and 9 (Problem Solving)
Developing Convert 3 units of time with no remainders to solve word problems.
Expected Convert 3 units of time with remainders to solve word problems.
Greater Depth Non-direct conversion of 4 units of time with remainders and decimals to solve word problems.

More Year 5 Converting Units resources.

Did you like this resource? Don't forget to review it on our website.

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Converting Units of Time

1a. Arrange the cards into a correct number sentence.

4 minutes	>	300 seconds

D

PS

Converting Units of Time

1b. Arrange the cards into a correct number sentence.

5 years	<	48 months

D

PS

2a. Jack says,



I'm going to a concert in 70 days!

Mia says,



That's only 7 weeks away!

Is Mia correct?
Explain your reasoning.

D

R

2b. Logan says,



I finished the race in 3 minutes.

Zairah says,



Wow! That's only 180 seconds!

Is Zairah correct?
Explain your reasoning.

D

R

3a. Some children at Oakland Primary School are celebrating their birthday.

Cameron is 108 months old.

Kayleigh is 8 years old.

Lee is 84 months old.

Who is the youngest?

D

PS

3b. Three friends take a nap before they go to a party.

Evie sleeps for 120 minutes.

Raheem sleeps for 3 hours.

Leticia sleeps for 240 minutes.

Who has the longest nap?

D

PS

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Converting Units of Time

4a. Arrange the cards into a correct number sentence. Find all the possibilities using both symbols.

>	3,780 seconds
3,900 seconds	<
72 minutes	

E PS

5a. Kelsey says,



It's my birthday in 13 weeks!

Joe says,



Only 80 days to go!

Is Joe correct?
Explain your reasoning.

E R

6a. Class 5 complete their Ancient Egyptians craft project.

Alfie makes a canopic jar in 2 hours 30 minutes.

Chloe makes a paper scroll in 115 minutes.

Lucy makes a pyramid in 2 hours 40 minutes.

Who makes their craft the quickest?

E PS

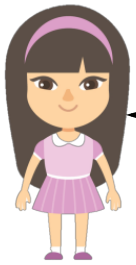
Converting Units of Time

4b. Arrange the cards into a correct number sentence. Find all the possibilities using both symbols.

=	66 months
55 months	<
5 years 6 months	

E PS

5b. Lily says,



I'm going to the beach in 35 hours!

Ravi says,



3 days and 5 hours to go!

Is Ravi correct?
Explain your reasoning.

E R

6b. Three children compete in a race.

Ella finishes in 4 minutes 8 seconds.

Harry finishes in 252 seconds.

Aamina finishes in 3 minutes 90 seconds.

Who finishes the race last?

E PS

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Converting Units of Time

7a. Arrange the cards into a correct number sentence. Find all the possibilities using 3 symbols.

<	1.75 hours
9,000 seconds	>
=	2 hours
105 minutes	

GD PS

7b. Arrange the cards into a correct number sentence. Find all the possibilities using 3 symbols.

=	168 hours
1,440 minutes	<
>	8 days
192 hours	

GD PS

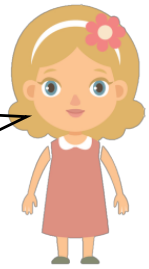
8a. Mo says,



I'll be 16 in 4 years.

Ellie says,

That's 208 weeks away!



Is Ellie correct?
Explain your reasoning.

GD R

8b. Maisie says,



The test starts in 3 hours!

Oscar says,

That's 10,800 more seconds yet!



Is Oscar correct?
Explain your reasoning.

GD R

9a. Some children are going away on holiday this summer.

Hanshika is going to Spain for 3 weeks.
James is going to Turkey for 26 days.
Ellis is going to Florida for 240 hours.
Izzy is going to France for 2.5 weeks.

Who is going on the shortest holiday?

GD PS

9b. Four athletes are training for a world championship tournament.

Shannon has trained for 68 months.
Jaiden has trained for 4.75 years.
Lexi has trained for 156 weeks.
Will has trained for 5.25 years.

Who has trained for the shortest time?

GD PS

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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 ÷ 7 = 10 so 70 days = 10 weeks. 7 x 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 x 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 x 52 = 208

9a. Ellis is going on the shortest holiday as he is only away for 10 days.

Reasoning and Problem Solving
Converting Units of Time

Developing

1b. 48 months < 5 years

2b. Yes, Zairah is correct. There are 60 seconds in 1 minute. 3 x 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 x 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 x 60 = 180. There are 60 seconds per minute so 180 x 60 = 10,800

9b. Lexi has trained for the shortest time as 156 weeks = 3 years.

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