Steps to Success

Lockdown Learning - DT	
Date	25.2.21
Subject/s	Maths
Learning Objective 	To convert between units of time

		SA 	TA 
Success Criteria 	I know 60 seconds = 1 minute 1 hour = 60 minutes 7 days = 1 week 52 weeks = 1 year 365 days = 1 year		
	I can use my knowledge of multiples to convert between units of time		
Support	Independent Adult Support ( ) Group Work		

Pre-task:

42 days = _____ weeks
5 weeks and 5 days = _____ days
60 days = _____ weeks and _____ days

75 minutes = ____ hours and _____ minutes
1.5 minutes = _____ seconds
2 hours and 10 minutes = _____ minutes

Pre-task Answers

42 days = 6 weeks
5 weeks and 5 days = 40 days
60 days = 8 weeks and 4 days

75 minutes = 1 hours and 15 minutes
1.5 minutes = 90 seconds
2 hours and 10 minutes = 130 minutes

Teacher Led

Key information:

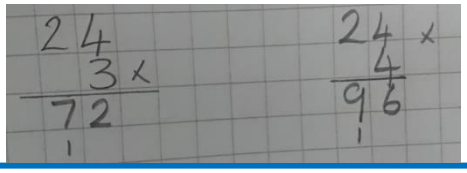
To convert from years to months – multiply by 12.For example:
3 years = 3 x 12 = 36 months.
3 years and 5 months = 3 x 12 = 36 + 5 = 41 months

To convert from months to years – divide by 12
For example:
48 months = 48 ÷ 12 = 4 years
55 months = 55 ÷ 12 = 4 years and 7 months

To convert from weeks to days – multiply by 7
For example:
5 weeks = 5 x 7 = 35 days
4 weeks and 5 days = 4 x 7 = 28 + 5 = 33 days

To convert from days to weeks – divide by 7.
For example:
63 days = 63 ÷ 7 = 9 weeks
36 days = 36 ÷ 7 = 5 weeks and 1 day

To convert from days to hours – multiply by 24
For example:
3 days = 3 x 24 = 72 hours
4 days and 6 hours = 4 x 24 = 96 + 6 = 102 hours



To convert from hours to days – divide by 24
For example:
240 hours = 240 ÷ 24 = 10 days
248 hours = 240 ÷ 24 = 10 days and 8 hours

To convert from hours to minutes – multiply by 60
For example:
4 hours = 4 x 60 = 240 minutes *(4 x 6 x 10)*
5 hours and 30 minutes = 5 x 60 = 300 + 30 = 330 minutes

To convert from minutes to hours – divide by 60
For example:
360 minutes = 360 ÷ 60 = 6 hours *(36 ÷ 6)*
250 minutes = 250 ÷ 60 = 4 hours and 10 minutes

To convert from minutes to seconds – multiply by 60 (just like from hours to minutes)
For example:
4 minutes = 4 x 60 = 240 seconds
5 minutes and 30 seconds = 5 x 60 = 300 + 30 = 330 seconds

To convert from seconds to minutes – divide by 60 (just like from minutes to hours)
For example:
360 seconds = 360 ÷ 60 = 6 minutes
250 seconds = 250 ÷ 60 = 4 minutes and 10 seconds

Fluency – choose A or B

A)

1) 2 minutes = ___ seconds
(2) 180 seconds = ___ minutes
3) 4 hours = ___ minutes
(4) 140 minutes = ___ hours and ___ minutes
5) 2 weeks = ___ days
(6) 35 days = ___ weeks
7) 3 weeks and 5 days = ___ days
(8) 21 days = ___ weeks
9) 16 days = ___ weeks and ___ days
(10) 60 months = ___ years
11) 96 months = ___ years
(12) $2\frac{1}{2}$ minutes = ___ seconds

B)

1) 1 minute 47 seconds = ___ seconds
(2) 500 seconds = ___ minutes ___ seconds
3) 2 hours 35 minutes = ___ minutes
(4) 419 minutes = ___ hours and ___ minutes
5) 5 days 17 hours = ___ hours
(6) 100 hours = ___ days ___ hours
7) 2 weeks and 3 days = ___ days
(8) 40 days = _____ weeks ___ days
9) 3 years 6 months = ___ months
(10) 70 months = ___ years ___ months
11) $\frac{3}{4}$ of hour = ___ minutes
12) $\frac{1}{3}$ of 2 minutes = ___ seconds

Fluency Answers

A)

1) 2 minutes = 120 seconds
(2) 180 seconds = 3 minutes
3) 4 hours = 240 minutes
(4) 140 minutes = 2 hours and 20 minutes
5) 2 weeks = 14 days
(6) 35 days = 7 weeks
7) 3 weeks and 5 days = 26 days
(8) 21 days = 3 weeks
9) 16 days = 2 weeks and 2 days
(10) 60 months = 5 years
11) 96 months = 8 years
(12) $2\frac{1}{2}$ minutes = 150 seconds

B)

1) 1 minute 47 seconds = 107 seconds
(2) 500 seconds = 8 minutes 20 seconds
3) 2 hours 35 minutes = 155 minutes
(4) 419 minutes = 6 hours and 59 minutes
5) 5 days 17 hours = 137 hours
(6) 100 hours = 4 days 4 hours
7) 2 weeks and 3 days = 17 days
(8) 40 days = 5 weeks 5 days
9) 3 years 6 months = 42 months
(10) 70 months = 5 years 10 months
11) $\frac{3}{4}$ of hour = 45 minutes
12) $\frac{1}{3}$ of 2 minutes = 40 seconds

Problem Solving and Reasoning

Use it!

Explain it!

Three children are running a race.

- Tim finishes the race in 3 minutes 5 seconds.
- Lila finishes the race in 192 seconds.
- Pip finishes the race in 2 minutes and 82 seconds.

Who finishes the race first?

Use it!

Lucy's birthday is in March.
Jason's birthday is in April.
Lucy is 96 hours older than Jason.
What dates could Lucy's and Jason's birthdays be?

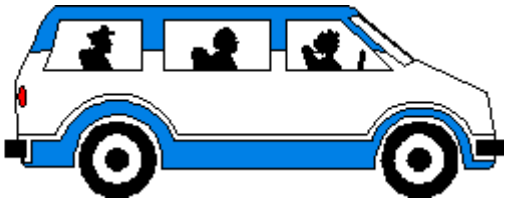
Answers
Tim: 3 min 5 s Lila: 3 min 12 s Pip: 3 min 22 s Tim finishes the race first.
Lucy: 28th March, 29th March, 30th March, 31st March Jason: 1st April, 2nd April, 3rd April, 4th April Children choose dates 4 days apart.

Further Challenge

A group of 10 students are on a field trip when their bus breaks down 40 miles away from the school.

A teacher takes 5 of them back to school in her car, travelling at an average speed of 40 miles per hour.

The other 5 students start walking towards school at a steady 4 miles per hour.



The teacher drops the 5 at school, then immediately turns around and comes back for the others, again travelling at a steady speed of 40 miles per hour.

How far have the students walked by the time the car reaches them?