Reasoning and Problem Solving Step 2: Years, Months, Weeks and Days

Teaching Note:

The questions in this resource do not refer to leap years unless specifically stated.

National Curriculum Objectives:

Mathematics Year 4: (4M4c) <u>Solve problems involving converting from hours to minutes;</u> minutes to seconds; years to months; weeks to days

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Determine a child's age using the given age of another child. One-step conversions only, using consecutive units of time, e.g. days to weeks.

Expected Determine a child's age using the given age of 2 other children. One-step conversions only, using consecutive units of time, e.g. days to weeks.

Greater Depth Determine 2 children's ages using the given age of 2 other children. One-step conversions only, using consecutive units of time, e.g. days to weeks.

Questions 2, 5 and 8 (Problem Solving)

Developing Use a simple statement to work out a specific date on a calendar. Duration is within one month.

Expected Use a simple statement to work out a specific date on a calendar. Duration is over a month but still on the calendar.

Greater Depth Use a simple statement to work out a specific date on a calendar. Duration is over a month and not visible on the calendar.

Questions 3, 6 and 9 (Reasoning)

Developing Calculate two statements to determine which is correct by making direct comparisons between days and weeks. One-step conversion only.

Expected Calculate two statements to determine which is correct by making direct comparisons between months, weeks and days. Up to two-step conversions.

Greater Depth Calculate two statements to determine which is correct by making comparing a mixture of days, weeks, months and years. Up to two-step conversions.

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Years, Months, Weeks and Days

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1a. Sabrina is 98 months old. Hallie is 6 months younger than Sabrina.

How old is Hallie?

Hallie is years and months old. 1b. Julia is 86 months old. Kal is 4 months older than Julia.

How old is Kal?

Kal is

years and

months old.



2a. Leoni is going to visit her family at the seaside. She arrives on the 5th January and spends 10 days there before returning home.

Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
January								
		1	2	3	4	5		
6	7	8	9	10	11	12		
13	14	15	16	17	18	19		
20	21	22	23	24	25	26		
27	28	29	30	31				

What date does she return home?

2b. Albert goes on a skiing holiday for 2 weeks to the Alps. He gets home on the 30th November.

Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
	November							
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28	29	30		

What date did he start his holiday?

3b. Helen and Joel are discussing years.

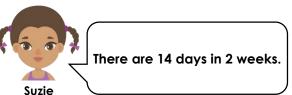


PS

3a. Jak and Suzie are discussing days.

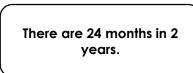
There are 13 days in a fortnight.

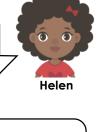




Who is correct? Explain why.







PS



There are 14 months in 2



Who is correct? Explain why.



Years, Months, Weeks and Days

Years, Months, Weeks and Days

4a. Elena is 10 years and 1 month old. Harry is 13 months younger than Elena. Jack is 3 months older than Harry.

How old is Jack?

months old. Jack is years and

4b. Hanif is 114 months old. Dakota is 6 months younger than Hanif. Violet is 6 months older than Dakota.

How old is Violet?

Violet is years and months old.



5a. Louisa is going on holiday on the 17th August. She spends 1 week in France and 9 days in Spain.

Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
August								
1 2 3 4 5								
6	7	8	9	10	11	12		
13	14	15	16	17	18	19		
20	21	22	23	24	25	26		
27	28	29	30	31				
September								
					1	2		

What date does she return home?

5b. Jonah is on an expedition. He leaves Peru on the 4th July and it takes him 2 weeks to explore the Andes. He then travels for 15 days by bus to Brazil.

Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
July								
	1	2	3	4	5	6		
7	8	9	10	11	12	13		
14	15	16	17	18	19	20		
21	22	23	24	25	26	27		
28	29	30	31					
August								
				1	2	3		

What date does he arrive in Brazil?



PS

6a. Saffie and Kai are discussing months.

The total amount of days in April, May and June is greater than in October, November and December.





The total amount of days in October, November and December is greater than in April, May and June.

Who is correct? Explain why.



6b. Daya and Darnell are discussing the month, June.

There are 4 weeks and 3 days in June.



PS



There are 4 weeks and 2 day in June.

Who is correct? Explain why.





Years, Months, Weeks and Days

Years, Months, Weeks and Days

7a. Thomas is 9 years and 7 months old. Joe is 108 months old. Carla is 6 months older than Joe. Suzie is 9 months younger than Carla.

How old is Carla? How old is Suzie?

Carla is years and months old. months old. Suzie is years and

7b. Dante is 110 months old. Charlie is 8 years and 2 months old. Eliza is 5 months older than Dante. Asha is 6 months younger than Charlie.

How old is Eliza? How old is Asha?

Eliza is years and months old.

Asha is years and months old.



8a. Ethan returns home from travelling on the 3rd January. He had been travelling for 1 month, 1 week and 6 days.

					-		
Mon	Tue	Wed	Thurs	Fri	Sat	Sun	
24	25	26	27	28	29	30	
31							
December							
	1	2	3	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	31				
January							
				1	2	3	

What day did he set off travelling?

8b. The date is 12th June. Anne has 3 weeks and 6 days left until she is on holiday from school.

Mon	Tue	Wed	Thurs	Fri	Sat	Sun		
June								
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28	29	30		
July								
1	2	3	4	5	6	7		

What date does she break up from school?



9a. Jan and Michael are discussing years.

There are 144 months in 12 years.





Who is correct? Explain why.

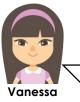


9b. Thea and Vanessa are discussing days.

There are always 90 days in January, February and March.



PS



There are always 91 days in January, February and March.

Who is correct? Explain why.





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Developing

1a. Hallie is 7 years and 8 months old.

2a. Wednesday 15th January

3a. Jak is correct. There are 7 days in 1

week so $2 \times 7 = 14 \text{ days}$.

Expected

4a. Jack is 9 years and 3 months old.

5a. Sunday 2nd September

6a. Kai is correct. There are 92 days in October, November and December combined and only 91 days in April, May and June combined.

<u>Greater Depth</u>

7a. Carla is 9 years and 6 months old. Suzie is 8 years and 9 months old.

8a. Friday 21st November

9a. Jan is correct. There are 12 months in 1 year so $12 \times 12 = 144$ months. Michael is incorrect because there are 52 weeks in 1 year so $52 \times 5 = 260$ days.

<u>Developing</u>

1b. Kal is 7 years and 6 months old.

2b. Sunday 16th November

3b. Helen is correct. There are 12 months

in 1 year so $2 \times 12 = 24$ months.

Expected

4b. Violet is 9 years and 6 months old.

5b. Saturday 2nd August

6b. Darnell is correct. There are 30 days in June. 7 days x 4 weeks = 28 days, 28 days

+ 2 days = 30 days.

Greater Depth

7b. Eliza is 9 years and 7 months old. Asha is 7 years and 8 months old.

8b. Tuesday 9th July

9b. Both Thea and Vanessa could be correct. If it is a leap year, there are 91 days in January, February and March combined but if it is not a leap year, there are only 90.

