Lesson 3

Thursday 25th June 2020

I am learning to answer reasoning and problem solving arithmetic fraction questions.

Try your best to answer as many questions as you can. 😀

Reasoning Questions

Key vocabulary:	Your answer
Jack is calculating $4\frac{2}{7} - 2\frac{6}{7}$ He adds $\frac{1}{7}$ to both numbers.  $4\frac{2}{7} - 2\frac{6}{7} = 4\frac{3}{7} - 3$ so the answer is $1\frac{3}{7}$ Explain why Jack is correct.	
Eva and Amir both work on a homework project. Eva  I spent $4\frac{1}{4}$ hours a week for 4 weeks doing my project. I spent $2\frac{3}{4}$ hours a week for 5 weeks doing my project.  Amir Who spent the most time on their project? Explain your reasoning.	

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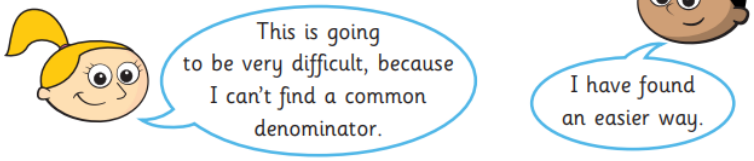
Problem Solving

8 Eva and Amir are working out this calculation.

$$\frac{1}{4} + \frac{25}{100} - \frac{2}{8} - \frac{9}{36}$$



Find Amir's solution. Explain how this calculation can be solved.

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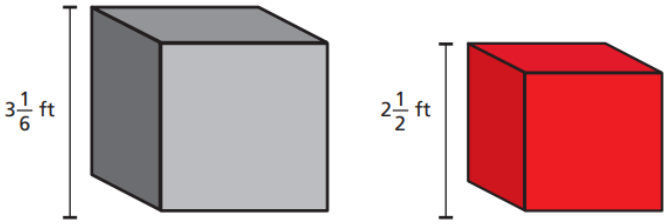

Jack builds a tower using grey blocks.

Alex builds a tower using red blocks.

The towers are exactly the same height.

How many blocks could they each have used?

A car is travelling from Halifax to Brighton.

In the morning, it completes $\frac{2}{3}$ of the journey.

In the afternoon, it completes $\frac{1}{5}$ of the journey.

What fraction of the journey has been travelled altogether?

What fraction of the journey is left to travel?

If the journey is 270 miles, how far did the car travel in the morning?

How far did the car travel in the afternoon?

How far does the car have left to travel?

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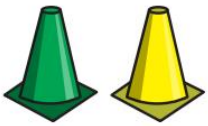
6 There are some cones in the PE shed.

Classes 1, 2 and 3 share them equally.

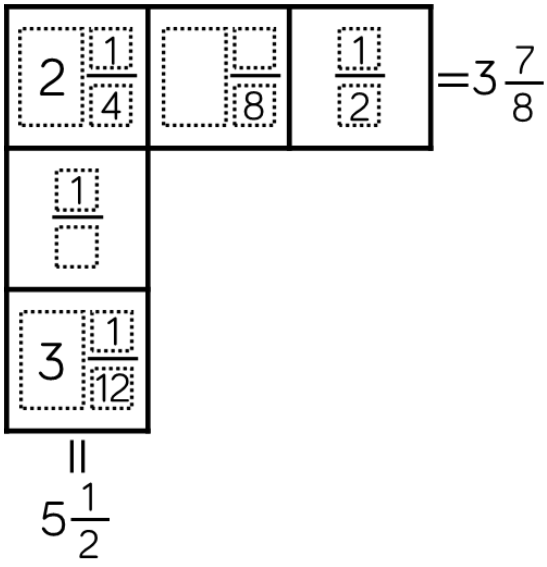
- Class 1 put theirs into 4 equal piles.
- Class 2 put theirs into 5 equal piles.
- Class 3 put theirs into 11 equal piles.



What fraction of the whole number of cones is in each pile?

	Fraction in each pile
Class 1	
Class 2	
Class 3	

Each row and column adds up to make the total at the end.
Use this information to complete the diagram.



The mass of Annie's suitcase is $29\frac{1}{2}$ kg.

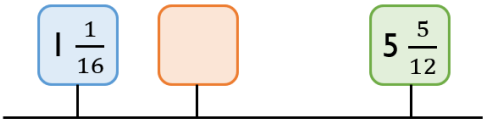
Teddy's suitcase is $2\frac{1}{5}$ kg lighter than Annie's.

How much does Teddy's suitcase weigh?

How much do the suitcases weigh altogether?

There is a weight allowance of 32 kg per suitcase.

How much below the weight allowance are Annie and Teddy?

A blue, orange and green box are on a number line.  The number in the green box is $3\frac{2}{3}$ more than the orange box. The number in the orange box is: $\square\frac{\square}{\square}$ The number in the orange box is $\frac{\square}{\square}$ greater than the number in the blue box.	
Rosie walks for $\frac{3}{4}$ of an hour over 3 days. She walks for the same amount of time each day. How many minutes does Rosie walk each day?	

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