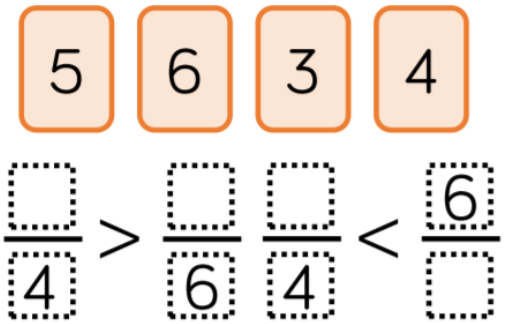
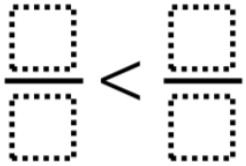
Challenge Questions

A.

Use the digit cards to complete the statements.



Find three examples of ways you could complete the statement.



Can one of your ways include an improper fraction?

B.

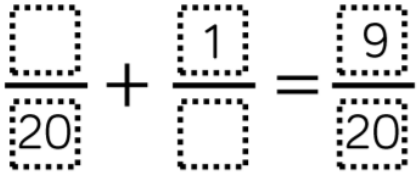
Mo is comparing the fractions $\frac{3}{7}$ and $\frac{6}{11}$

He wants to find a common denominator.

Explain whether you think this is the most effective strategy.

C.

Use the same digit in both boxes to complete the calculation.
Is there more than one way to do it?



D.

Dexter subtracted $\frac{3}{5}$ from a fraction and his answer was $\frac{8}{45}$

What fraction did he subtract $\frac{3}{5}$ from?

Give your answer in its simplest form.

E.

Fill in the boxes to make the calculation correct.

$$1\frac{\square}{10} = \frac{3}{\square} + \frac{\square}{10}$$

How many different possibilities can you find?

F.

Jack and Whitney have some juice.

Jack drinks $2\frac{1}{4}$ litres and Whitney drinks $2\frac{5}{12}$ litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?

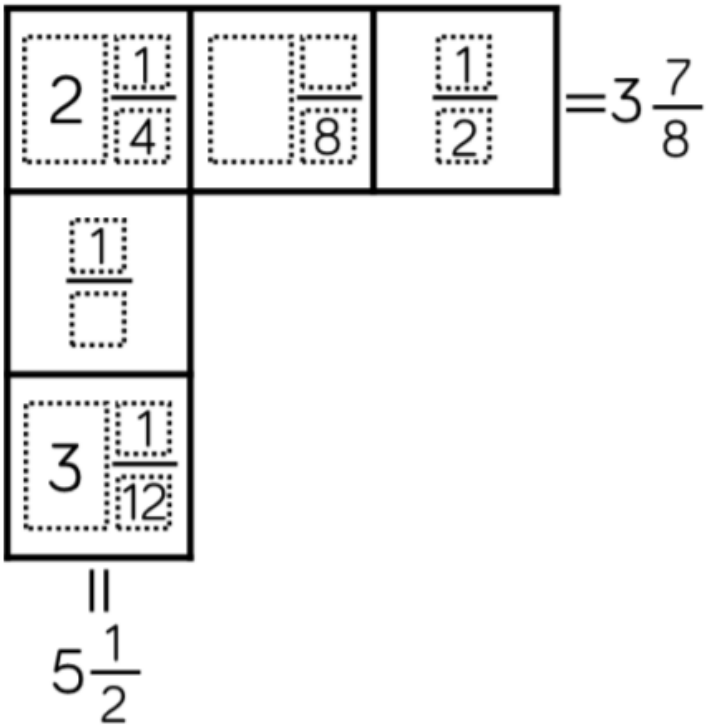
G.

Fill in the missing numbers.

$$4\frac{5}{6} + \frac{\square\square}{\square\square} = 10\frac{1}{3}$$

H.

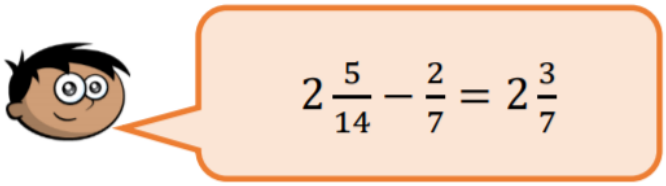
Each row and column adds up to make the total at the end.
Use this information to complete the diagram.



I.

Amir is attempting to solve $2\frac{5}{14} - \frac{2}{7}$

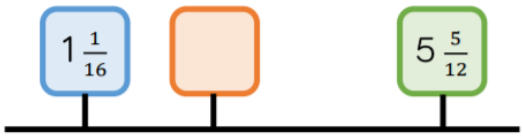
Here is his working out:



Do you agree with Amir?
Explain your answer.

J.

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.

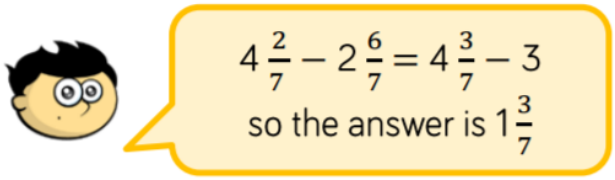
The number in the orange box is: $\frac{\square}{\square}$

The number in the orange box is $\frac{\square}{\square}$ greater than the number in the blue box.

K.

Jack is calculating $4\frac{2}{7} - 2\frac{6}{7}$

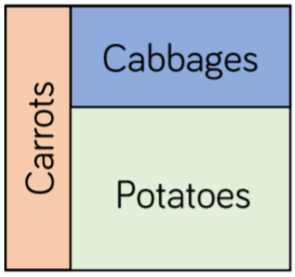
He adds $\frac{1}{7}$ to both numbers.



Explain why Jack is correct.

L.

Here is a vegetable patch. $\frac{1}{5}$ of the patch is for carrots. $\frac{3}{8}$ of the patch is for cabbages.



What fraction of the patch is for carrots and cabbages altogether?
What fraction of the patch is for potatoes?
What fraction more of the patch is for potatoes than cabbages?
Give your answers in their simplest form.

The vegetable patch has an area of 80 m^2
What is the area covered by each vegetable?

M.

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

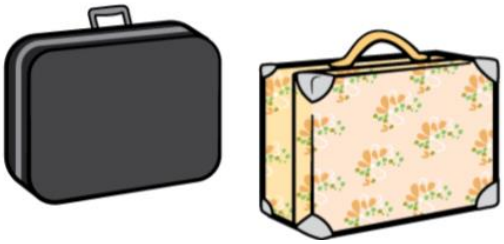
Teddy's suitcase is $2\frac{1}{5}$ kg lighter than Annie's.

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?



N.

Find the value of the 

 $+ 3\frac{4}{9} = 6\frac{1}{3}$

$8\frac{1}{10} -$  $=$