

Day 1 extension questions

1. Two children are solving $\frac{1}{3} + \frac{4}{15}$

Eva starts by drawing this model:



Alex starts by drawing this model:



Can you explain each person's method and how they would complete the question?

Which method do you prefer and why?

2. Eva is attempting to answer:

$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20}$$



$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20} = \frac{7}{35}$$

Do you agree with Eva?
Explain why.

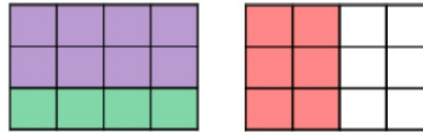
3. Jack has added 3 fractions together to get an answer of $\frac{17}{18}$



What 3 fractions could he have added?

Can you find more than one answer?

4. Annie is adding three fractions. She uses the model to help her.



What could her three fractions be?

How many different combinations can you find?

Can you write a number story to represent your calculation?

5. The sum of three fractions is $2\frac{1}{8}$

The fractions have different denominators.

All of the fractions are greater than or equal to a half.

None of the fractions are improper fractions.

All of the denominators are factors of 8

What could the fractions be?

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?

Day 1 extension questions

1. Two children are solving $\frac{1}{3} + \frac{4}{15}$

Eva starts by drawing this model:



Alex starts by drawing this model:



Can you explain each person's method and how they would complete the question?
Which method do you prefer and why?

Possible answer:
Each child may have started with a different fraction in the calculation. e.g. Eva has started by shading a third. She now needs to divide each third into five equal parts so there are fifteen equal parts altogether. Eva will then shade $\frac{4}{15}$ and will have $\frac{9}{15}$ altogether.

3. Jack has added 3 fractions together to get an answer of $\frac{17}{18}$



What 3 fractions could he have added?

Can you find more than one answer?

Possible answers:

$$\frac{1}{18} + \frac{4}{18} + \frac{13}{18}$$

$$\frac{1}{9} + \frac{5}{9} + \frac{5}{18}$$

$$\frac{1}{6} + \frac{5}{9} + \frac{2}{9}$$

$$\frac{1}{18} + \frac{1}{6} + \frac{13}{18}$$

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

5. The sum of three fractions is $2\frac{1}{8}$

The fractions have different denominators.

All of the fractions are greater than or equal to a half.

None of the fractions are improper fractions.

All of the denominators are factors of 8

What could the fractions be?

$$\frac{1}{2} + \frac{3}{4} + \frac{7}{8}$$

Children could be given less clues and explore other possible solutions.

2. Eva is attempting to answer:

$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20}$$



$$\frac{3}{5} + \frac{1}{10} + \frac{3}{20} = \frac{7}{35}$$

Do you agree with Eva?
Explain why.

Eva is wrong because she has added the numerators and denominators together and hasn't found a common denominator. The correct answer is $\frac{17}{20}$

4. Annie is adding three fractions. She uses the model to help her.



What could her three fractions be?

How many different combinations can you find?

Can you write a number story to represent your calculation?

Possible answer:

$$\frac{2}{3} + \frac{4}{12} + \frac{1}{2} = 1\frac{1}{2}$$

Other equivalent fractions may be used.

Example story:
Some children are eating pizzas. Jack eats two thirds, Amir eats four twelfths and Dexter eats half a pizza. How much pizza did they eat altogether?

6. 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?

They drink
 $4\frac{2}{3}$ litres
altogether.

Encourage children to justify which method they prefer and why. Ensure children discuss which method is more or less efficient.