How many different ways can you balance the equation?

$$\frac{5}{9} + \frac{\square}{9} = \frac{8}{9} + \frac{\square}{9}$$

$$\frac{5}{16} + \frac{\square}{8} = \frac{15}{16}$$

$$\frac{\square}{20} + \frac{7}{10} = \frac{17}{20}$$

Annie solved this calculation.

$$\frac{3}{4} + \frac{3}{16} = \frac{3+3}{4+16}$$
$$= \frac{6}{20}$$
$$= \frac{3}{10}$$

Can you spot and explain her mistake?

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

Eva starts by drawing this model:
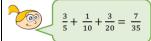
Alex starts by drawing this model:

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

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.
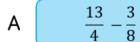
Jack and Whitney have some juice.

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?
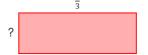
Which subtraction is the odd one out?

A $\quad \dfrac{13}{4} - \dfrac{3}{8}$

B $\quad \dfrac{10}{3} - \dfrac{2}{9}$

C $\quad \dfrac{23}{7} - \dfrac{1}{3}$
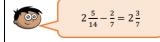
Explain why.

The perimeter of the rectangle is $\frac{16}{9}$

$\frac{2}{3}$

?

Work out the missing length.

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

Here is his working out:

$$2\frac{5}{14} - \frac{2}{7} = 2\frac{3}{7}$$

Do you agree with Amir?
Explain your answer.