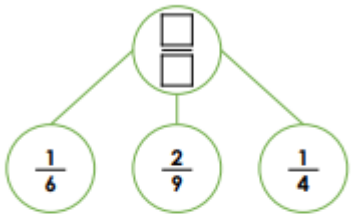
Challenge questions – Fluency

7a. Complete the model below.



8a. Complete the calculation.

$$\frac{2}{3} + \frac{1}{7} + \frac{1}{6} = \frac{\square}{\square}$$

Challenge questions – problem solving

7a. Rita solved the calculation below.

$$\frac{1}{6} + \frac{1}{3} + \frac{1}{4} + \frac{1}{9} = \frac{32}{36}$$

Is she correct? Prove it.

8a. Use the clues below to work out which 3 fractions add together to total $\frac{25}{36}$.

- One denominator is 36. Two of the denominators are less than 10 but greater than 5.
- The denominators are all different and are factors of 36.

9a. Match the calculations to the correct answers.

A. $\frac{1}{4} + \frac{1}{6} + \frac{1}{3} =$ $\frac{3}{4}$

B. $\frac{1}{3} + \frac{1}{4} + \frac{1}{8} =$ $\frac{17}{24}$

$\frac{16}{24}$

$\frac{1}{6} + \frac{2}{3}$

Jen

$\frac{1}{6} + \frac{2}{7} + \frac{1}{2}$

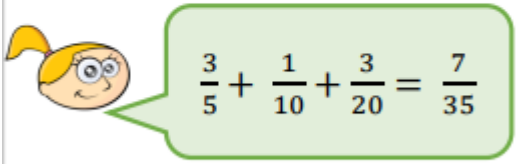
Todd

Explain your answer.

Application questions

Eva is attempting to answer:

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



Do you agree with Eva?
Explain why.

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?

Answers – Fluency

7a. $\frac{23}{36}$

8a. $\frac{41}{42}$

9a. A = $\frac{3}{4}$; B = $\frac{17}{24}$

Problem solving

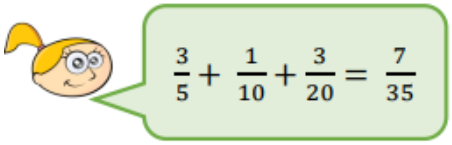
7a. Rita is incorrect because $\frac{1}{6}+\frac{1}{3}+\frac{1}{4}+\frac{1}{9}=\frac{31}{36}$

8a. $\frac{1}{36}+\frac{3}{9}+\frac{2}{6}=\frac{25}{36}$

9a. True because $\frac{41}{42}$ is more than $\frac{40}{42}$.

Eva is attempting to answer:

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



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 $\frac{17}{20}$

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:

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

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

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

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

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