

Challenge questions – Fluency

9a. Complete the calculation shown below. Give your answer as an equivalent fraction.

$$\frac{2}{6} + \frac{3}{9} = \frac{\boxed{}}{\boxed{}}$$



VF

10a. Complete the calculation for this model.

$$\frac{\boxed{}}{15} + \frac{4}{\boxed{}} = \frac{\boxed{}}{5}$$



VF

11a. Complete the calculation below using your knowledge of equivalent fractions.

$$\frac{12}{16} + \frac{3}{24} =$$

12a. Circle the correct answer.

$$\frac{6}{18} + \frac{4}{12} = \frac{\boxed{}}{\boxed{}}$$



A. $\frac{10}{18}$ B. $\frac{5}{6}$ C. $\frac{2}{3}$

Application questions

Challenge questions – problem solving

8a. True or false?

$$\frac{4}{15} + \frac{7}{12} = \frac{49}{60}$$

Explain your answer.



R

9a. Baz and Leo have eaten part of a quiche.

I ate $\frac{5}{12}$ of the quiche.



Baz



Leo

I ate between $\frac{1}{9}$ and $\frac{4}{9}$ of the quiche.

What fraction of the quiche could they have eaten altogether?
Show your working.



PS

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?

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

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

Annie solved this calculation.



Can you spot and explain her mistake?

Answers – Fluency

Problem solving

9a. $\frac{2}{3}$ (accept equivalent fractions)

10a. $\frac{6}{15} + \frac{4}{10} = \frac{4}{5}$

11a. $\frac{7}{8}$ (accept equivalent fractions)

12a. C

7a. Asha is incorrect. The missing

numerator is 3 because $\frac{18}{12} - \frac{3}{12} = 1 \frac{3}{12}$
and $1 \frac{3}{12} = 1 \frac{1}{4}$.

8a. Various answers where the numerators

total 12, for example: $\frac{5}{9} + \frac{7}{9} = 1 \frac{1}{3}$.

9a. $\frac{12}{15} + \frac{8}{15} = 1 \frac{1}{3}$

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

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

5

3

Annie solved this calculation.



Can you spot and explain her mistake?

Annie is wrong because she has just added the numerators and the denominators. When adding fractions with different denominators you need to find a common denominator.

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.

