Challenge questions – Fluency

Challenge questions – problem solving

5a. Add the two fractions together. Give your answer in its simplest form.

$$2\frac{3}{4} + \frac{12}{8} = \boxed{}\ \boxed{}$$

VF

6a. Circle the correct answer to the calculation below.

$$4\frac{2}{3} + \frac{14}{12} = ?$$

A. $6\frac{1}{6}$ B. 6 C. $5\frac{5}{6}$

VF

7a. Work out the missing numbers in the following calculation.

$$6\frac{1}{4} + 2\frac{5}{} = 8\frac{}{16}$$

4a. Circle the odd one out. Explain why.

A. $1\frac{4}{15} + 3\frac{3}{5}$

B. [diagram] +

C. [diagram] +

D. $2\frac{3}{4} + 2\frac{1}{8}$

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5a. Libby has completed the following calculation.

$$2\frac{3}{4} + \frac{14}{12} = 3\frac{1}{4}$$

Is she correct?
Explain how you know.

6a. I am thinking of a number. When I add it to the number on the card the answer will give the whole number of 10.

$$6\frac{4}{12}$$

The number is either a mixed number or an improper fraction with a different denominator.

Find 3 possible answers.

Application questions

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?

Fill in the missing numbers.

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

4a. C is the odd one out as it is the only answer where the whole is less than 4.

5a. No. The correct answer is $3\frac{11}{12}$. $\frac{14}{12}$ is equivalent to $1\frac{2}{12}$ and $2\frac{3}{4}$ is equivalent to $2\frac{9}{12}$ so $2\frac{9}{12} + 1\frac{2}{12} = 3\frac{11}{12}$.

6a. Various answers, for example:

$3\frac{2}{3}$, $\frac{11}{3}$ or $3\frac{4}{6}$

5a. $4\frac{1}{4}$

6a. C

7a. $6\frac{1}{4} + 2\frac{5}{16} = 8\frac{9}{16}$

Application questions

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.

Fill in the missing numbers.

$$4\,\frac{5}{6} \;+\; \boxed{}\!\boxed{} \;=\; 10\,\frac{1}{3}$$

$5\frac{3}{6}$ or $5\frac{1}{2}$