

## Challenge questions – Fluency

9a. Match the calculation to the correct answer.

$$\frac{8}{12} + \frac{6}{12}$$

A.  $\frac{16}{12}$

B.  $1 \frac{5}{12}$

C.  $1 \frac{1}{6}$



VF

10a. Complete the missing digits to make the calculation correct.

$$\frac{\boxed{\phantom{0}}}{6} + \frac{3}{6} = \frac{\boxed{\phantom{0}}}{6} = 1 \frac{1}{3}$$



VF

11a. Calculate the following and write your answer as its equivalent fraction with the smallest denominator.

$$\frac{11}{8} - \frac{7}{8} = \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}}$$

12a. Chesney runs  $\frac{5}{6}$  of a running track.

Shania runs  $\frac{4}{6}$  of the same running track.

How many laps of the running track have they completed altogether?

Record your answer as a mixed number with the lowest possible denominator.



VF

## Challenge questions – problem solving

7a. Asha is finding the missing numerator in the following calculation:

$$\frac{18}{12} - \frac{\boxed{\phantom{0}}}{12} = 1 \frac{1}{4}$$



I think the missing numerator must be 17.

Is she correct? Explain why.



1

8a. Complete the fractions to make the calculation correct.

$$\frac{\boxed{\phantom{0}}}{9} + \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}} = 1 \frac{1}{3}$$

Find two possibilities.



PI

9a. Arrange the digit cards to create an addition question.

$$\frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}} + \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}} = \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}}$$

12

1

8

15

3

You can use two cards twice.

## Application questions

How many different ways can you balance the equation?

$$\frac{5}{9} + \frac{\boxed{\phantom{0}}}{9} = \frac{8}{9} + \frac{\boxed{\phantom{0}}}{9}$$

A chocolate bar has 12 equal pieces.

Amir eats  $\frac{5}{12}$  more of the bar than Whitney.

There is one twelfth of the bar remaining.

What fraction of the bar does Amir eat?

What fraction of the bar does Whitney eat?

## Answers – Fluency

9a. C

10a.  $\frac{5}{6} + \frac{3}{6} = \frac{8}{6} = 1 \frac{1}{3}$

11a.  $\frac{1}{2}$

12a. Altogether they have completed  $1 \frac{1}{2}$  laps of the running track.

## Problem solving

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

How many different ways can you balance the equation?

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

Possible answers:

$$\frac{5}{9} + \frac{3}{9} = \frac{8}{9} + \frac{0}{9}$$

$$\frac{5}{9} + \frac{4}{9} = \frac{8}{9} + \frac{1}{9}$$

$$\frac{5}{9} + \frac{5}{9} = \frac{8}{9} + \frac{2}{9}$$

Any combination of fractions where the numerators add up to the same total on each side of the equals sign.

A chocolate bar has 12 equal pieces.

Amir eats  $\frac{5}{12}$  more of the bar than Whitney.

There is one twelfth of the bar remaining.

What fraction of the bar does Amir eat?

What fraction of the bar does Whitney eat?

Amir eats  $\frac{8}{12}$  of the chocolate bar and Whitney eats  $\frac{3}{12}$  of the chocolate bar.