## Four rules with fractions

(1) Work out the missing total.

| $\frac{2}{3}$ | $\frac{2}{3}$ | $\frac{2}{3}$ | $\frac{2}{3}$ | $2 \frac{1}{3}$ |
| :--- | :--- | :--- | :--- | :--- |

Show all the steps in your working.

Explain your method to a partner.
(2) Work out the perimeter of the rectangle.


Explain your method to your partner.
Did you work it out in the same way?

3
Complete the calculations.
a) $\left(\frac{2}{3}+\frac{2}{3}\right) \times 3=\square$
b) $\left(\frac{2}{3}+\frac{2}{3}\right) \div 3=\square$
c) $\frac{2}{3}+\frac{2}{3} \times 3=\square$
d) $\frac{2}{3}+\frac{2}{3} \div 3=$ $\square$
(4) Jack mixes $\frac{2}{3}$ of a litre of orange juice and $\frac{3}{4}$ of a litre of apple juice.
He pours the juice into 5 glasses equally.
How much juice is in each glass?

The area of these two shapes are equal.
Find the height of the rectangle.


6 In a class, $\frac{2}{3}$ of the pupils are boys. $\frac{1}{4}$ of the girls wear glasses and $\frac{1}{6}$ of the boys wear glasses. Do more boys or girls wear glasses?

Explain your reasoning.

7 Work out the calculation

$$
\left(1 \frac{3}{5}-\frac{7}{10}\right)^{2}
$$

8 Use what you know about working with fractions to explain, prove or disprove the following statements.
a)

Half of a half of a half is an eighth.
b)

Quarter of a half plus half of a quarter is a quarter.
$\qquad$
$\qquad$

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Explore the different totals you can make using each card once only.

