

Add and subtract fractions where denominators share a simple common multiple

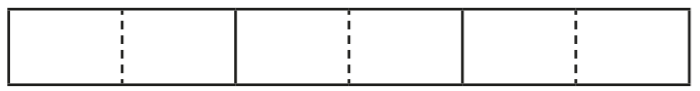
1 Write the lowest common multiple of the pairs of numbers.

a) 3, 9 d) 12, 10

b) 6, 9 e) 12, 5

c) 6, 10 f) 12, 6

2 a) Use the bar model to show that $\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6}$



What is the answer to $\frac{2}{3} + \frac{1}{6}$?

Using the same bar model, work out the answers to the calculations.

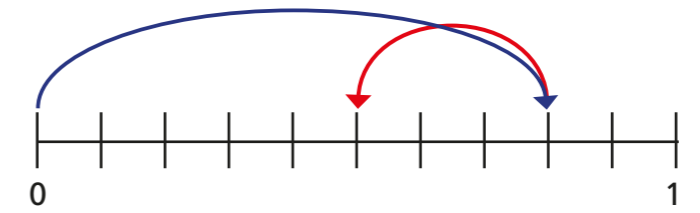
b) $\frac{5}{6} - \frac{1}{3} =$

c) $\frac{1}{3} + \frac{1}{6} =$

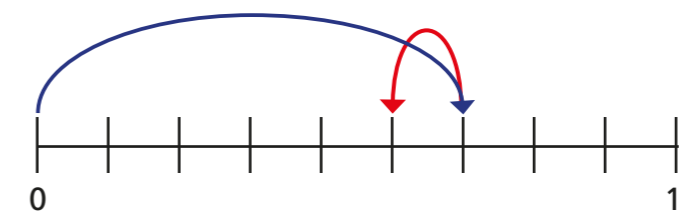
d) $\frac{1}{2} + \frac{1}{3} =$



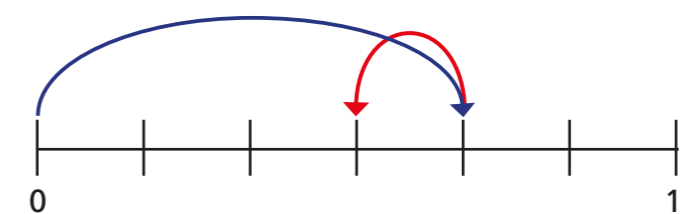
3 Match the number line to the calculation and complete the calculation.



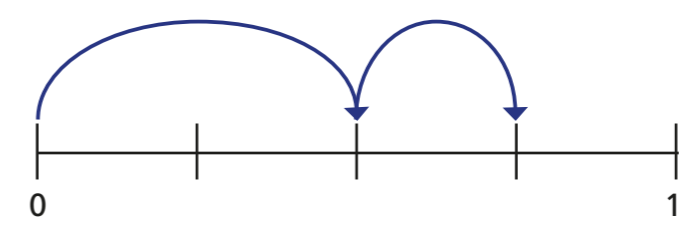
$\frac{1}{2} + \frac{1}{4} =$



$\frac{2}{3} - \frac{1}{6} =$



$\frac{2}{3} - \frac{1}{9} =$

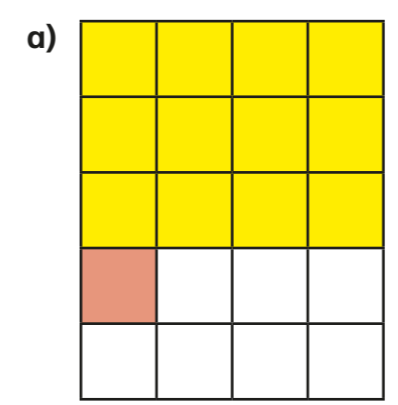


$\frac{4}{5} - \frac{3}{10} =$

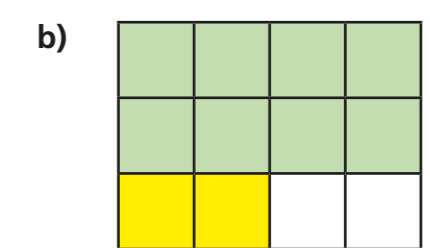
Which answers can be simplified?

4 What fractional calculations are the arrays representing?

Give all fractions in their simplest form.

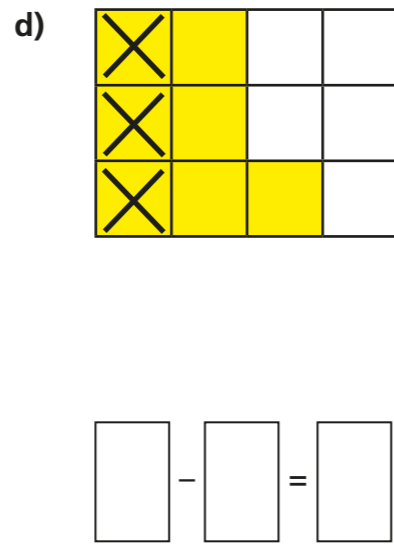
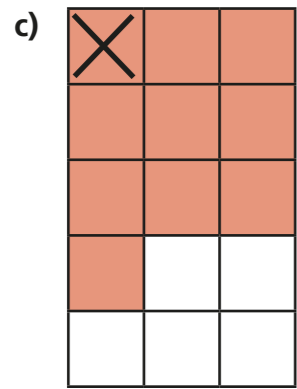


+ =



+ =





5 Circle the calculation that is equivalent to $\frac{1}{10} + \frac{1}{15}$

$\frac{1.5}{15} + \frac{1}{15}$

$\frac{1}{30} + \frac{1}{30}$

$\frac{3}{30} + \frac{2}{30}$

$\frac{3}{10} + \frac{2}{15}$

How do you know? Talk to a partner.

6 Work out the calculations using equivalent fractions.

Give your answers in their simplest form.

a) $\frac{1}{6} + \frac{1}{18} =$

e) $\frac{9}{20} + \frac{5}{10} =$

b) $\frac{5}{9} + \frac{1}{18} =$

f) $\frac{4}{9} + \frac{1}{6} =$

c) $\frac{2}{3} - \frac{2}{9} =$

g) $\frac{7}{10} - \frac{1}{4} =$

d) $\frac{20}{21} - \frac{3}{7} =$

h) $\frac{4}{15} + \frac{3}{10} =$



7 Work out the calculations.
Give your answers in their simplest form.

a) $\frac{5}{18} + \frac{1}{36} + \frac{1}{6} =$

b) $\frac{11}{12} - \frac{11}{30} - \frac{1}{5} =$

8 Solve the equation $x + \frac{2}{3} = \frac{7}{12}$

$x =$

9 Here are some number cards.

3

6

12

15

a) What is the smallest positive answer you can make using the cards in these calculations?

You can use each card only once per calculation.

$\frac{\square}{20} - \frac{\square}{30}$

$\frac{\square}{20} + \frac{\square}{30}$

b) Where would you put the number cards to make a total of $\frac{1}{6}$?
What about a negative answer?

