Add fractions within 1

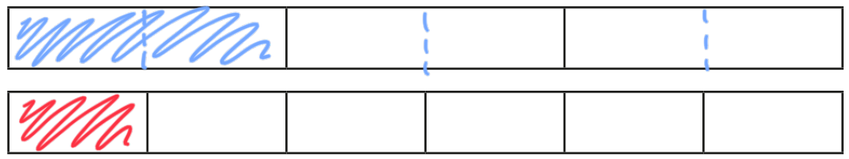
1 Complete the additions.

Use the bar models to help you.

a)

$\frac{1}{2} + \frac{1}{6} = \boxed{\frac{3}{6}}$

b)



$\frac{1}{3} + \frac{1}{6} = \boxed{\frac{1}{2}}$

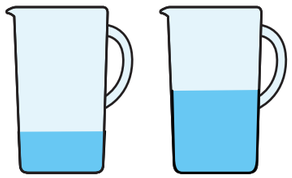
c)

$\frac{2}{3} + \frac{1}{6} = \boxed{\frac{5}{6}}$

2 Match the additions that have the same answer.

$\frac{3}{4} + \frac{1}{12}$	$\frac{10}{12} + \frac{1}{12}$
$\frac{2}{3} + \frac{1}{12}$	$\frac{6}{12} + \frac{1}{12}$
$\frac{5}{6} + \frac{1}{12}$	$\frac{9}{12} + \frac{1}{12}$
$\frac{1}{2} + \frac{1}{12}$	$\frac{8}{12} + \frac{1}{12}$

3 Here are two jugs.



One jug contains $\frac{5}{18}$ litres of water.

The other jug contains $\frac{4}{9}$ litres of water.

How many litres of water are there altogether?

There are $\boxed{\frac{13}{18}}$ litres of water altogether.

4 **a)** Complete the calculations.

$\frac{1}{5} + \frac{1}{10} = \frac{3}{10}$	$\frac{1}{16} + \frac{5}{32} = \frac{7}{32}$
$\frac{2}{5} + \frac{1}{10} = \frac{5}{10}$ $(\frac{1}{2})$	$\frac{1}{8} + \frac{5}{32} = \frac{9}{32}$
$\frac{3}{5} + \frac{1}{10} = \frac{7}{10}$	$\frac{1}{4} + \frac{5}{32} = \frac{13}{32}$
$\frac{4}{5} + \frac{1}{10} = \frac{9}{10}$	$\frac{1}{2} + \frac{5}{32} = \frac{21}{32}$

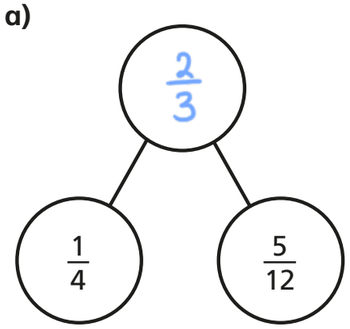
b) Can you spot any patterns? Talk to a partner about it.

c) What calculation would come next in each set?

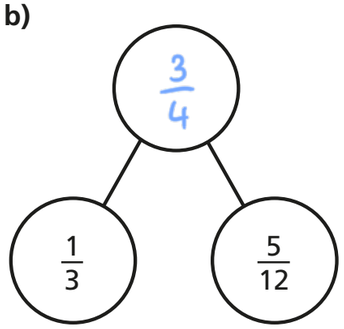
$\frac{5}{5} + \frac{1}{10} = \frac{11}{10} = 1\frac{1}{10}$ $\quad\quad$ $\frac{1}{1} + \frac{5}{32} = 1\frac{5}{32}$

5 Complete the part-whole models.

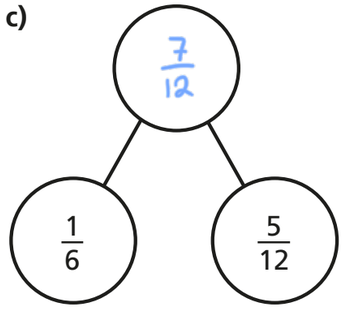
a)



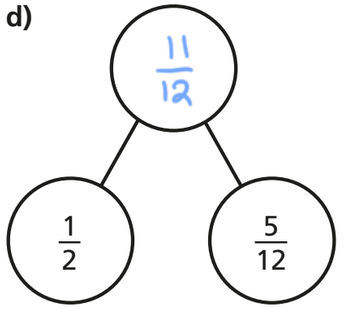
b)



c)



d)



6 $\frac{\square}{8} + \frac{\square}{16} = \frac{7}{8}$

What could the missing numerators be?

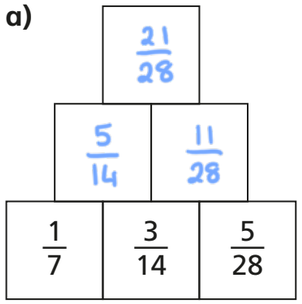
Give six different possibilities.

$\frac{1}{8} + \frac{12}{16} = \frac{7}{8}$ $\quad$ $\frac{3}{8} + \frac{8}{16} = \frac{7}{8}$ $\quad$ $\frac{5}{8} + \frac{4}{16} = \frac{7}{8}$

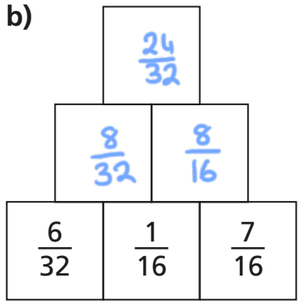
$\frac{2}{8} + \frac{10}{16} = \frac{7}{8}$ $\quad$ $\frac{4}{8} + \frac{6}{16} = \frac{7}{8}$ $\quad$ $\frac{6}{8} + \frac{2}{16} = \frac{7}{8}$

7 Complete the addition pyramids.

a)



b)



c) What fraction is equivalent to both of the fractions at the top of the pyramids?

$\frac{3}{4}$