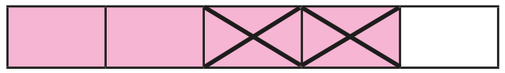
Add and subtract fractions with the same denominator

1 Complete the calculations for the representations.

a)

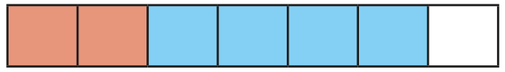
$\frac{1}{5} + \frac{3}{5} = \frac{\square}{5}$

b)



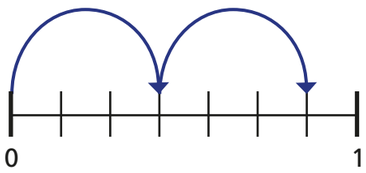
$\frac{4}{5} - \frac{2}{5} = \frac{\square}{5}$

c)



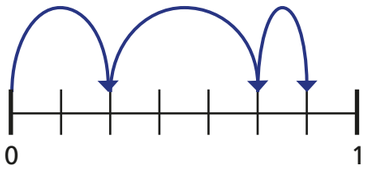
$\frac{2}{\square} + \frac{4}{\square} = \frac{\square}{\square}$

d)



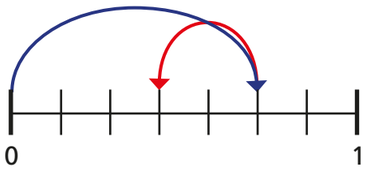
$\frac{3}{7} + \frac{\square}{\square} = \frac{\square}{\square}$

e)



$\frac{2}{\square} + \frac{3}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$

f)



$\frac{\square}{7} - \frac{2}{7} = \frac{3}{7}$

2 Work out the calculations.

a) $\frac{4}{9} + \frac{3}{9} = \square$

b) $\frac{4}{9} + \frac{4}{9} = \square$

c) $\frac{4}{9} + \frac{5}{9} = \square$

d) $\frac{8}{13} - \frac{3}{13} = \square$

e) $\frac{8}{13} - \frac{3}{13} - \frac{5}{13} = \square$

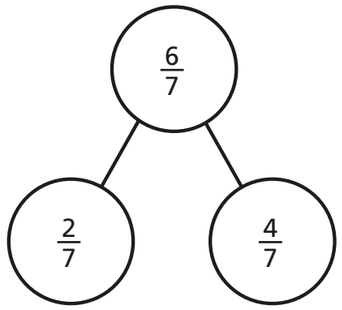
f) $\frac{12}{25} + \frac{5}{25} + \frac{8}{25} = \square$

Which two questions had the same answer? _____

Discuss with a partner why this happened.

3 Here is a part-whole model.

a) Write all the calculations that the part-whole model represents.



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_____

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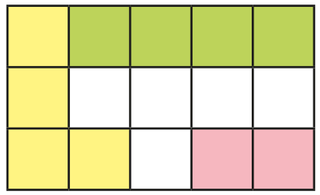
_____

b) How many other ways could you make $\frac{6}{7}$?

4 Jack and Nijah have shaded a grid.



a) Jack uses it to show that $\frac{4}{15} + \frac{4}{15} = \frac{8}{15}$

Where does Jack see this?

b) NIjah uses it to show that $\frac{15}{15} - \frac{4}{15} = \frac{11}{15}$

Where does Nijah see this?

c) How many fraction calculations can you find from the grid?

You could build the grid to help you discover more.

Write your calculations.

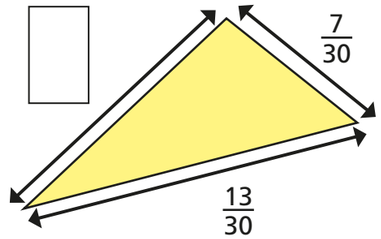
5 Find the missing terms in the linear sequences.

a) $0, \frac{2}{9}, \frac{4}{9}, \square, \frac{8}{9}$

b) $\frac{11}{12}, \frac{8}{12}, \square, \frac{2}{12}$

c) $\frac{1}{25}, \square, \frac{9}{25}, \square$

6 The perimeter of the triangle is $\frac{29}{30}$ units.



Find the missing length.

7 Work out the calculations.

a) $\frac{7}{10} + \frac{3}{10} = \square$

b) $\frac{2}{3} - \frac{1}{3} + \frac{2}{5} + \frac{3}{5} = \square$

c) $\frac{3}{4} + \frac{1}{3} + \frac{1}{4} - \frac{2}{3} = \square$

d) $\frac{17}{10} + \frac{2}{9} - \frac{7}{10} - \frac{2}{9} = \square$

8 Solve the equations.

a) $x + \frac{2}{11} = \frac{7}{11}$ $\quad x = \square$

b) $y + \frac{7}{12} = 1$ $\quad y = \square$