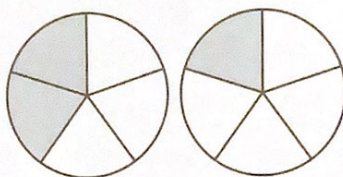


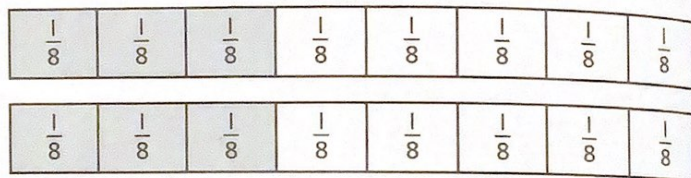
# Adding and subtracting fractions with the same denominator

1 Work out the following calculations.

$$\text{a) } \frac{2}{5} + \frac{1}{5} = \frac{\boxed{3}}{\boxed{5}}$$



$$\text{b) } \frac{3}{8} + \frac{3}{8} = \frac{\boxed{6}}{\boxed{8}} = \frac{\boxed{3}}{\boxed{4}}$$

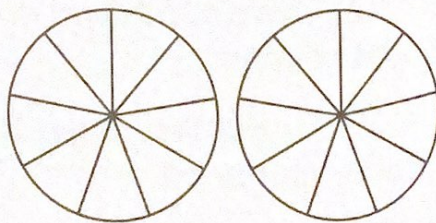


$$\text{c) } \frac{9}{10} - \frac{7}{10} = \frac{\boxed{2}}{\boxed{10}} = \frac{\boxed{1}}{\boxed{5}}$$

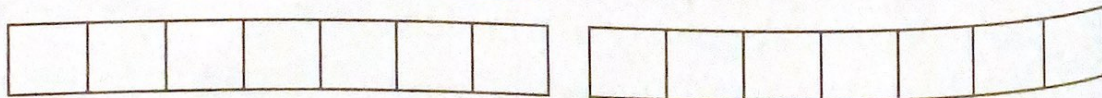


2 Work out each of the following calculations.

$$\text{a) } \frac{5}{9} + \frac{8}{9} = \frac{\boxed{13}}{\boxed{9}} = \boxed{1} \frac{\boxed{4}}{\boxed{9}}$$



$$\text{b) } \frac{5}{7} + \frac{4}{7} + \frac{1}{7} = \frac{\boxed{10}}{\boxed{7}} = \boxed{1} \frac{\boxed{3}}{\boxed{7}}$$



- 3 a) Circle all the calculations that have an answer less than 1.

$$\frac{7}{12} + \frac{3}{12}$$

$$\frac{7}{9} - \frac{4}{9}$$

$$\frac{7}{10} + \frac{8}{10}$$

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

- b) Circle all the calculations that have an answer greater than 1.

$$\frac{3}{4} + \frac{3}{4}$$

$$\frac{5}{6} - \frac{3}{6}$$

$$\frac{6}{10} + \frac{2}{10}$$

$$\frac{7}{8} + \frac{9}{8}$$

- 4 Complete the calculations, stating each answer in its simplest form.

a)  $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$

e)  $\frac{2}{3} + \frac{2}{3} + \frac{1}{3} = \frac{5}{3} = 1 \frac{2}{3}$

b)  $\frac{7}{9} - \frac{6}{9} = \frac{1}{9}$

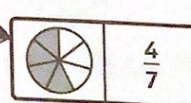
f)  $\frac{3}{11} + \frac{5}{11} - \frac{2}{11} = \frac{6}{11}$

c)  $\frac{3}{10} + \frac{8}{10} = \frac{11}{10} = 1 \frac{1}{10}$

g)  $\frac{3}{8} + \frac{7}{8} + \frac{5}{8} = \frac{15}{8} = 1 \frac{7}{8}$

d)  $\frac{7}{12} - \frac{1}{12} = \frac{6}{12} = \frac{1}{2}$

- 5 Draw lines to join the fractions that sum to make 1.



Explain how you made your choices.

$\frac{7}{7}$  makes 1 whole so I chose pairs of numerators that total 7.

6 Work out the missing numbers.

a)  $\frac{3}{8} + \frac{\boxed{5}}{8} = 1$

b)  $\frac{\boxed{2}}{9} + \frac{7}{9} = 1$

c)  $1 - \frac{4}{5} = \frac{\boxed{1}}{5}$

d)  $1 - \frac{7}{12} = \frac{\boxed{5}}{12}$

e)  $1 - \frac{\boxed{1}}{3} = \frac{2}{3}$

f)  $1 - \frac{\boxed{9}}{10} = \frac{1}{10}$

7 Are these calculations correct? Explain your answers.

a)  $\frac{4}{5} + \frac{1}{6} + \frac{1}{5} + \frac{5}{6} = 2$

Yes, because  $\frac{1}{5} + \frac{4}{5} = 1$  and  $\frac{5}{6} + \frac{1}{6} = 1$   
and  $1 + 1 = 2$

b)  $\frac{5}{8} + \frac{3}{8} - \frac{5}{6} = \frac{1}{6}$

Yes, because  $\frac{5}{8} + \frac{3}{8} = 1$   $1 = \frac{6}{6}$   
so  $1 - \frac{5}{6} = \frac{1}{6}$ .

CHALLENGE

## Reflect

$\frac{5}{9} + \frac{\boxed{\phantom{000}}}{9} > 1$

What do you know about the numerator of the second fraction?  
How do you know?

- The numerator must be greater than 4 because
- $\frac{5}{9} + \frac{4}{9} = 1$ , it needs to be greater than 1 to make it a correct statement e.g.  $\frac{5}{9} + \frac{6}{9} > 1$