Fraction Addition

1 Rewrite each pair of fractions so that they have the same denominator as each other.

(a) $\frac{1}{5}$ $\frac{1}{10}$

(b) $\frac{1}{5}$ $\frac{1}{3}$

(c) $\frac{2}{5}$ $\frac{3}{4}$

(d) $\frac{7}{3}$ $\frac{7}{8}$

(e) $\frac{1}{8}$ 1

(f) $\frac{1}{8}$ 2

2 Calculate the following, simplifying your answer fully:

(a) $\frac{3}{5}+\frac{2}{5}$

(b) $\frac{2}{3}+\frac{1}{6}$

(c) $\frac{3}{4}+\frac{4}{5}$

(d) $\frac{5}{4}+3$

(e) $1\frac{1}{3}+1\frac{1}{3}$

(f) $1\frac{1}{3}+2\frac{1}{4}$

3 Below is an addition grid. Circle the answers which are incorrect.

+	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$
$\frac{1}{3}$	$\frac{2}{3}$	$\frac{2}{12}$	$\frac{8}{15}$
$\frac{1}{4}$	$\frac{7}{12}$	$\frac{1}{2}$	$\frac{2}{9}$
$\frac{1}{5}$	$\frac{3}{15}$	$\frac{9}{20}$	$\frac{2}{10}$

4 I win some prize money in a competition.

I give $\frac{2}{7}$ of my money to my sister and give $\frac{1}{3}$ of my money to my brother. What fraction of the money do I have left?

5 Use this empty number line to show why the following calculation is correct.

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

6 Investigate the following sequence of calculations.

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

$\frac{1}{2}+\frac{1}{4}+\frac{1}{8}$

$\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}$

$\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\frac{1}{32}$

What do you notice about your answers?

Write down the answer to the calculation below, without working:

$\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\frac{1}{32}\ldots.+\frac{1}{1024}$

7 Create 3 pairs of different fractions which sum to $\frac{3}{5}$

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

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

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

8 Redo this question using a more efficient strategy.

$\frac{3}{5}+\frac{3}{10}$

$=\frac{30}{50}+\frac{15}{50}$

$=\frac{45}{50}$

$=\frac{9}{10}$

$\frac{3}{5}+\frac{3}{10}$

$=$