Challenge 1 – Answers

1a. $\frac{5}{6}$ and $\frac{6}{6}$ should be shaded.

2a. $\frac{7}{6}$

3a. $1\frac{3}{8}$; the next two numbers in the sequence are $1\frac{4}{8}$ and $1\frac{5}{8}$.

4a. $\frac{2}{3}$ and $\frac{5}{3}$; the sequence is $\frac{1}{3}$, $\frac{2}{3}$, 1, $1\frac{1}{3}$ and $1\frac{2}{3}$.

1b. $\frac{3}{4}$, $\frac{4}{4}$, $\frac{5}{4}$; $\frac{3}{4}$, 1, $1\frac{1}{4}$

3b. Carys is correct. The next number would be $\frac{8}{4}$ which is equivalent to 2 wholes.

Challenge 2 – Answers

5a. $\frac{8}{12}$ and $\frac{5}{12}$ should be shaded.

6a. $\frac{14}{9}$

7a. $2\frac{5}{6}$; the next two numbers in the sequence are $2\frac{3}{6}$ and $2\frac{1}{6}$.

8a. $\frac{7}{3}$ and $\frac{9}{3}$; the sequence is $\frac{1}{3}$, 1, $1\frac{2}{3}$, $2\frac{1}{3}$ and 3.

4a. $\frac{11}{8}$, $\frac{8}{8}$, $\frac{5}{8}$; $1\frac{3}{8}$, 1, $\frac{5}{8}$

4b. $\frac{4}{5}$, $\frac{6}{5}$, $\frac{8}{5}$; $\frac{4}{5}$, $1\frac{1}{5}$, $1\frac{3}{5}$

6a. Alice is incorrect. The next number should be $\frac{4}{5}$ because the sequence decreases by $\frac{2}{5}$ each time.

9a. $1\frac{2}{8}$ and 2

10a. $\frac{9}{6}$

11a. $2\frac{7}{8}$; the next two numbers in the sequence are $2\frac{5}{8}$ and $2\frac{3}{8}$.

12a. $\frac{6}{3}$ and $\frac{8}{3}$; the sequence is $1\frac{1}{3}$, 2, $2\frac{2}{3}$, $3\frac{1}{3}$ and 4.

7b. $\frac{3}{4}$, $\frac{5}{4}$, $\frac{7}{4}$; $\frac{3}{4}$, $1\frac{1}{4}$, $1\frac{3}{4}$

8b. Various answers, e.g. decrease by $\frac{3}{12}$, making the fifth fraction $1\frac{5}{12}$.

9b. Brad is correct. The next number would be 2 because the sequence increases by $\frac{3}{7}$ each time.

Extension – Answers

Here is a number sequence.

$$\frac{5}{12}, \frac{7}{12}, \frac{10}{12}, \frac{14}{12}, \frac{19}{12}, \underline{\hspace{2cm}}$$

Which fraction would come next?
Can you write the fraction in more than one way?

The fractions are increasing by one more twelfth each time. The next fraction would be $\frac{25}{12}$

Circle and correct the mistakes in the sequences.

$$\frac{5}{12}, \frac{8}{12}, \frac{11}{12}, \frac{15}{12}, \frac{17}{12}$$

$$\frac{9}{10}, \frac{7}{10}, \frac{6}{10}, \frac{3}{10}, \frac{1}{10}$$

$$\frac{5}{12}, \frac{8}{12}, \frac{11}{12}, \boxed{\frac{14}{12}}, \frac{17}{12}$$

$$\frac{9}{10}, \frac{7}{10}, \boxed{\frac{5}{10}}, \frac{3}{10}, \frac{1}{10}$$

Play the fraction game for four players.
Place the four fraction cards on the floor.
Each player stands in front of a fraction.
We are going to count up in tenths starting at 0
When you say a fraction, place your foot on your fraction.

$$\frac{1}{10} \qquad \frac{2}{10}$$

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

How can we make 4 tenths?
What is the highest fraction we can count to?
How about if we used two feet?

2 children can make four tenths by stepping on one tenth and three tenths at the same time. Alternatively, one child can make four tenths by stepping on $\frac{2}{10}$ with 2 feet.
With one foot, they can count up to 11 tenths or one and one tenth.
With two feet they can count up to 22 tenths.