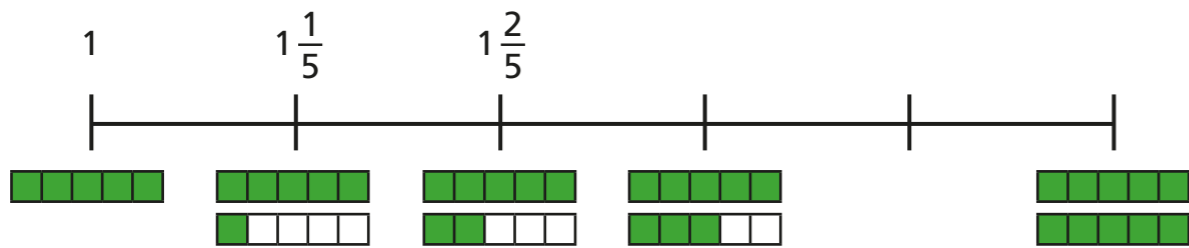# Number sequences

**1** Complete the number lines.

**a)**

$1 \qquad 1\frac{1}{5} \qquad 1\frac{2}{5}$

**b)**

$1 \qquad 1\frac{2}{5} \qquad\qquad\qquad\qquad 3$

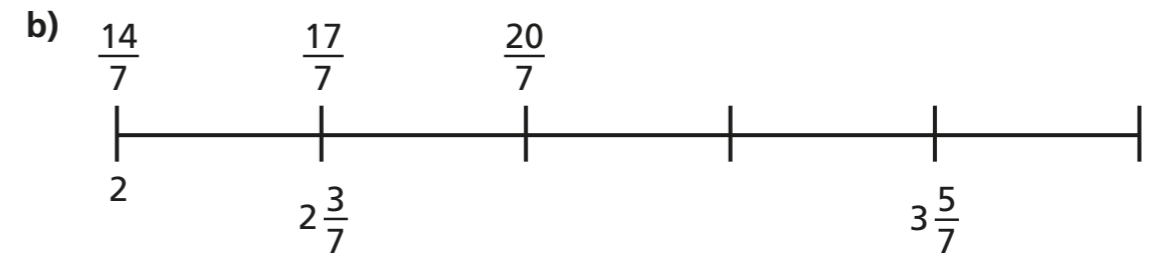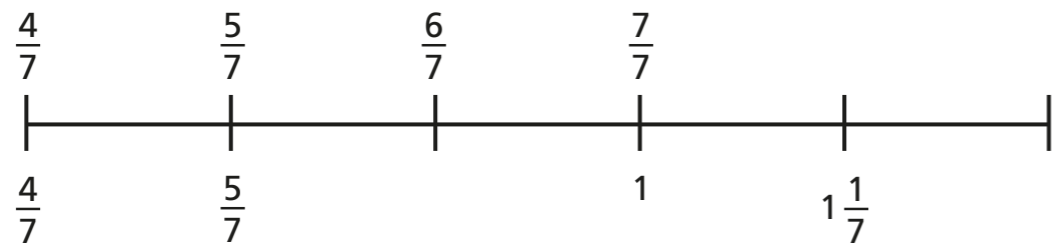**2** Complete the number lines.

**a)**

$\frac{4}{7} \qquad \frac{5}{7} \qquad \frac{6}{7} \qquad \frac{7}{7}$

$\frac{4}{7} \qquad \frac{5}{7} \qquad\qquad 1 \qquad 1\frac{1}{7}$

**b)**

$\frac{14}{7} \qquad \frac{17}{7} \qquad \frac{20}{7}$

$2 \qquad\qquad 2\frac{3}{7} \qquad\qquad\qquad 3\frac{5}{7}$

**c)**

$\frac{24}{8} \qquad\qquad\qquad\qquad \frac{15}{8} \qquad \frac{12}{8} \qquad \frac{9}{8}$
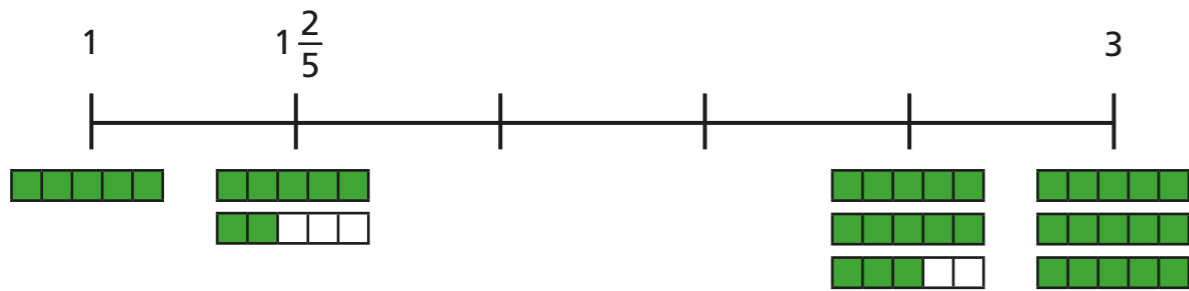
**3** Continue the sequences.

**a)** $2\frac{7}{8}, \quad 3\frac{1}{8}, \quad 3\frac{3}{8}, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}$

**b)** $5\frac{6}{7}, \quad 5\frac{3}{7}, \quad 5, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}$

**c)** $5\frac{6}{11}, \quad 5\frac{3}{11}, \quad 5, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}, \quad \boxed{\phantom{xx}}$

What is the same and what is different about the sequences in parts b) and c)?

Talk about it with a partner.

**4** Match each sequence to its rule.

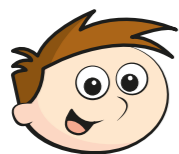| | |
|---|---|
| $2\frac{2}{3}$,  $3\frac{1}{3}$,  4,  $4\frac{2}{3}$ | add three quarters |
| $2\frac{1}{2}$,  $3\frac{1}{4}$,  4,  $4\frac{3}{4}$ | subtract two thirds |
| $4\frac{1}{3}$,  $3\frac{2}{3}$,  3,  $2\frac{1}{3}$ | add two thirds |
| $4\frac{1}{4}$,  $3\frac{3}{4}$,  $3\frac{1}{4}$,  $2\frac{3}{4}$ | subtract one half |

**5** Teddy and Rosie are finding the missing numbers in the sequence.

3, ☐ , ☐ , ☐ , ☐ , ☐ , ☐ , ☐ , 4

**a)**

I think the missing fractions are sevenths because there are seven blank number cards.
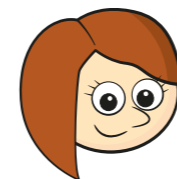
Do you agree with Teddy? _____

Explain your answer.

_____

_____

**b)** Complete the sequence.

3, ☐ , ☐ , ☐ , ☐ , ☐ , ☐ , ☐ , 4

**c)**

I think one of the missing fractions is equivalent to $3\frac{1}{2}$

Is Rosie correct? _____

Explain how you know.

_____

_____

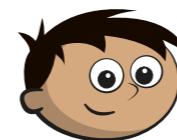**d)** Which other fractions in the sequence can you find equivalent fractions for?

**6**

I am thinking of a number sequence. The 1st and 4th terms are consecutive integers.

Write the rule for Amir's sequence.

_____

_____