# Varied Fluency
# Step 4: Number Sequences

## National Curriculum Objectives:

**Mathematics Year 5: (5F2a)** Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1  1/5 ]
**Mathematics Year 5: (5F3)** Compare and order fractions whose denominators are all multiples of the same number

## Differentiation:

**Developing** Questions to support counting forwards in mixed numbers and fractions with the same denominators.
**Expected** Questions to support sequencing mixed numbers and fractions using knowledge of equivalence.
**Greater Depth** Questions to support sequencing mixed numbers and improper fractions using knowledge of equivalence.

## More Year 5 Fractions resources.

## Did you like this resource? Don't forget to review it on our website.

# Number Sequences

## Number Sequences

**1a.** What is the missing number in the sequence below?

$$1 \quad 1\frac{1}{5} \quad 1\frac{2}{5} \quad 1\frac{3}{5} \quad 1\frac{4}{5} \quad ?$$

VF

**1b.** What is the missing number in the sequence below?

$$2\frac{3}{9} \quad 2\frac{4}{9} \quad 2\frac{5}{9} \quad ? \quad 2\frac{7}{9} \quad 2\frac{8}{9}$$

VF

**2a.** Tick the box to show where the mixed number $4\frac{3}{7}$ should go in the sequence.

$$\begin{array}{ccccccc} & A & & B & & C & \\ 4\frac{2}{7}, & \square & 4\frac{4}{7}, & \square & 4\frac{5}{7}, & \square & 4\frac{6}{7} \end{array}$$

VF

**2b.** Tick the box to show where the mixed number $3\frac{3}{6}$ should go in the sequence.

$$\begin{array}{ccccccc} & A & & B & & C & \\ 3\frac{1}{6}, & \square & 3\frac{2}{6}, & \square & 3\frac{4}{6}, & \square & 3\frac{5}{6} \end{array}$$

VF

**3a.** Sequence the numbers below from smallest to largest.

$$2\frac{6}{8} \qquad 3\frac{2}{8} \qquad 3$$

$$3\frac{1}{8} \qquad 2\frac{5}{8} \qquad 2\frac{7}{8}$$

VF

**3b.** Sequence the numbers below from smallest to largest.

$$3\frac{2}{4} \qquad 4 \qquad 3$$

$$3\frac{3}{4} \qquad 3\frac{1}{4} \qquad 4\frac{1}{4}$$

VF

**4a.** My sequence starts with the mixed number $5\frac{2}{3}$.

It is increasing by $\frac{1}{3}$.

Write the next 3 numbers in the sequence.

VF

**4b.** My sequence starts with the mixed number $4\frac{2}{10}$.

It is increasing by $\frac{1}{10}$.

Write the next 3 numbers in the sequence.

VF

**5a. What is the missing number in the sequence below?**

$2\frac{1}{6}$   $2\frac{1}{3}$   **?**   $2\frac{2}{3}$   $2\frac{5}{6}$   $3$

VF

**5b. What is the missing number in the sequence below?**

$4\frac{3}{5}$   $4\frac{2}{10}$   $3\frac{4}{5}$   **?**   $3$   $2\frac{3}{5}$

VF

**6a. Tick the box to show where the mixed number $5\frac{2}{8}$ should go in the sequence.**

     A      B      C

$5\frac{6}{8}$, □ $5\frac{1}{2}$, □ $5$ , □ $4\frac{3}{4}$

VF

**6b. Tick the box to show where the mixed number $1\frac{4}{10}$ should go in the sequence.**

     A      B      C

$1\frac{3}{10}$, □ $1\frac{1}{2}$, □ $1\frac{6}{10}$, □ $1\frac{7}{10}$

VF

**7a. Sequence the numbers below from smallest to largest.**

$3\frac{4}{12}$    $3\frac{1}{2}$    $3\frac{7}{12}$

$3\frac{5}{12}$    $3\frac{1}{6}$    $3\frac{1}{4}$

VF

**7b. Sequence the numbers below from largest to smallest.**

$5\frac{1}{4}$    $6\frac{2}{8}$    $7\frac{1}{4}$

$7\frac{6}{8}$    $6\frac{3}{4}$    $5\frac{6}{8}$

VF

**8a. My sequence starts with the mixed number $10\frac{1}{2}$.**

It is decreasing by $\frac{2}{6}$.

Write the next 5 numbers in the sequence.

VF

**8b. My sequence starts with the mixed number $9\frac{1}{2}$.**

It is increasing by $\frac{1}{4}$.

Write the next 5 numbers in the sequence.

VF

# Number Sequences

**9a.** What is the missing number in the sequence below?

$$3\frac{2}{10} \quad \frac{19}{5} \quad ? \quad 5 \quad \frac{28}{5} \quad 6\frac{1}{5}$$

VF

**9b.** What is the missing number in the sequence below?

$$8 \quad 7\frac{4}{16} \quad 6\frac{4}{8} \quad ? \quad \frac{20}{4} \quad 4\frac{2}{8}$$

VF

**10a.** Tick the box to show where the mixed number $8\frac{2}{5}$ should go in the sequence.

A     B     C

$$8\frac{8}{10}, \;\square\; \frac{86}{10}, \;\square\; 8\frac{1}{5}, \;\square\; 8$$

VF

**10b.** Tick the box to show where the mixed number $9\frac{1}{3}$ should go in the sequence.

A     B     C

$$9\frac{2}{9}, \;\square\; 9\frac{4}{9}, \;\square\; 9\frac{5}{9}, \;\square\; \frac{29}{3}$$

VF

**11a.** Sequence the numbers below from smallest to largest.

$$\frac{34}{8} \qquad 3\frac{3}{4} \qquad 4\frac{6}{8}$$

$$5\frac{1}{4} \qquad 3\frac{2}{8} \qquad \frac{46}{8}$$

VF

**11b.** Sequence the numbers below from largest to smallest.

$$6\frac{1}{5} \qquad 7 \qquad 6\frac{3}{5}$$

$$\frac{39}{5} \qquad 7\frac{4}{10} \qquad 8\frac{2}{10}$$

VF

**12a.** My sequence starts with the improper fraction $\frac{86}{7}$.

It is decreasing by $\frac{2}{14}$.

Write the next 5 numbers in the sequence as mixed numbers.

VF

**12b.** My sequence starts with the improper fraction $\frac{64}{6}$.

It is increasing by $\frac{4}{12}$.

Write the next 5 numbers in the sequence as mixed numbers.

VF

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Varied Fluency – Number Sequences – Year 5 Greater Depth

## Developing

**1a.** 2

**2a.** A

**3a.** $2\frac{5}{8}$, $2\frac{6}{8}$, $2\frac{7}{8}$, 3, $3\frac{1}{8}$, $3\frac{2}{8}$

**4a.** 6, $6\frac{1}{3}$, $6\frac{2}{3}$

## Developing

**1b.** $2\frac{6}{9}$

**2b.** B

**3b.** 3, $3\frac{1}{4}$, $3\frac{2}{4}$, $3\frac{3}{4}$, 4, $4\frac{1}{4}$

**4b.** $4\frac{3}{10}$, $4\frac{4}{10}$, $4\frac{5}{10}$

## Expected

**5a.** $2\frac{1}{2}$ or $2\frac{3}{6}$

**6a.** B

**7a.** $3\frac{1}{6}$, $3\frac{1}{4}$, $3\frac{4}{12}$, $3\frac{5}{12}$, $3\frac{1}{2}$, $3\frac{7}{12}$

**8a.** $10\frac{1}{6}$, $9\frac{5}{6}$, $9\frac{3}{6}$, $9\frac{1}{6}$, $8\frac{5}{6}$

## Expected

**5b.** $3\frac{2}{5}$

**6b.** A

**7b.** $7\frac{6}{8}$, $7\frac{1}{4}$, $6\frac{3}{4}$, $6\frac{2}{8}$, $5\frac{6}{8}$, $5\frac{1}{4}$

**8b.** $9\frac{3}{4}$, 10, $10\frac{1}{4}$, $10\frac{1}{2}$, $10\frac{3}{4}$

## Greater Depth

**9a.** $4\frac{2}{5}$ or $4\frac{4}{10}$ or $\frac{22}{5}$

**10a.** B

**11a.** $3\frac{2}{8}$, $3\frac{3}{4}$, $\frac{34}{8}$, $4\frac{6}{8}$, $5\frac{1}{4}$, $\frac{46}{8}$

**12a.** $12\frac{1}{7}$, 12, $11\frac{6}{7}$, $11\frac{5}{7}$, $11\frac{4}{7}$

## Greater Depth

**9b.** $5\frac{6}{8}$ or $5\frac{3}{4}$ or $\frac{23}{4}$

**10b.** A

**11b.** $8\frac{2}{10}$, $\frac{39}{5}$, $7\frac{4}{10}$, 7, $6\frac{3}{5}$, $6\frac{1}{5}$

**12b.** 11, $11\frac{2}{6}$, $11\frac{4}{6}$, 12, $12\frac{2}{6}$