

Homework/Extension

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 \[for example, \$2/5 + 4/5 = 6/5 = 1 \frac{1}{5}\$ \]](#)

Mathematics Year 5: (5F3) [Compare and order fractions whose denominators are all multiples of the same number](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Identify the odd one out. Questions to support counting forwards in mixed numbers and fractions with the same denominators.

Expected Identify the odd one out. Questions to support sequencing mixed numbers and fractions using knowledge of equivalence.

Greater Depth Identify the odd one out. Questions to support sequencing mixed numbers and improper fractions using knowledge of equivalence.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify the correct statement. Questions to support counting forwards in mixed numbers and fractions with the same denominators.

Expected Identify the correct statement. Questions to support sequencing mixed numbers and fractions using knowledge of equivalence.

Greater Depth Identify the correct statement. Questions to support sequencing mixed numbers and improper fractions using knowledge of equivalence.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Find the fraction sequence through the maze. Questions to support counting forwards in mixed numbers and fractions with the same denominators.

Expected Find the fraction sequence through the maze. Questions to support sequencing mixed numbers and fractions using knowledge of equivalence.

Greater Depth Find the fraction sequence through the maze. 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

1. Work out how the sequence is increasing. Which sequence is the odd the one out?

A. $2\frac{3}{4}$ 3 $3\frac{1}{4}$ $3\frac{2}{4}$ $3\frac{3}{4}$ 4

B. $2\frac{4}{6}$ $2\frac{5}{6}$ 3 $3\frac{1}{6}$ $3\frac{2}{6}$ $3\frac{3}{6}$

C. $5\frac{1}{4}$ $5\frac{2}{4}$ $5\frac{3}{4}$ 6 $6\frac{1}{4}$ $6\frac{2}{4}$



VF
HW/Ext

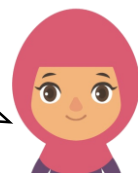
2. Nigela and Nadia are discussing the number that will come next in the sequence.



Nigela

I think the next number in the sequence will be 3.

I think the next number in the sequence will be $2\frac{1}{3}$.



Nadia

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

Who is correct?



VF
HW/Ext

3. Find your way through the maze by finding the number sequence.

<p>Start</p> <p>$5\frac{5}{8}$</p>	$5\frac{6}{8}$	$5\frac{7}{8}$	6	$6\frac{3}{8}$
	$5\frac{5}{8}$	$5\frac{6}{8}$	$6\frac{1}{8}$	$6\frac{2}{8}$
	$5\frac{4}{8}$	$6\frac{4}{8}$	$6\frac{2}{8}$	$6\frac{1}{8}$
	$6\frac{7}{8}$	7	$6\frac{3}{8}$	$6\frac{4}{8}$
				<p>Finish</p>



RPS
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Number Sequences

4. Work out how the sequence is increasing. Which sequence is the odd the one out?

A. $3 \frac{4}{8}$ $3 \frac{6}{8}$ 4 $4 \frac{2}{8}$ $4 \frac{4}{8}$ $4 \frac{6}{8}$

B. $5 \frac{4}{5}$ 6 $6 \frac{1}{5}$ $6 \frac{4}{10}$ $6 \frac{3}{5}$ $6 \frac{8}{10}$

C. $1 \frac{2}{5}$ $1 \frac{6}{10}$ $1 \frac{4}{5}$ 2 $2 \frac{2}{10}$ $2 \frac{4}{10}$



VF
HW/Ext

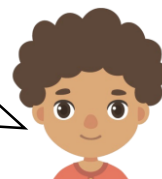
5. Jamie and Oliver are discussing the number that will come next in the sequence.



Jamie

I think the next number in the sequence will be $3 \frac{1}{4}$.

I think the next number in the sequence will be $3 \frac{2}{8}$.



Oliver

$\frac{1}{4}$ $\frac{6}{8}$ $1 \frac{2}{8}$ $1 \frac{3}{4}$ $2 \frac{2}{8}$ $2 \frac{6}{8}$

Who is correct?



VF
HW/Ext

6. Find your way through the maze by finding the number sequence.

<p>Start →</p> <p>$3 \frac{4}{7}$</p>	$3 \frac{6}{7}$	$4 \frac{4}{14}$	$4 \frac{1}{7}$	$5 \frac{10}{14}$	<p>→ Finish</p>
	$4 \frac{2}{14}$	$4 \frac{3}{7}$	$4 \frac{12}{14}$	$5 \frac{7}{7}$	
	$4 \frac{8}{14}$	$4 \frac{5}{7}$	$5 \frac{1}{7}$	$5 \frac{12}{14}$	
	$5 \frac{4}{7}$	5	$5 \frac{4}{14}$	$5 \frac{4}{7}$	



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Number Sequences

7. Work out how the sequence is increasing. Which sequence is the odd the one out?

- A. $3 \frac{1}{3}$ $\frac{34}{9}$ $4 \frac{2}{9}$ $4 \frac{6}{9}$ $\frac{46}{9}$ $5 \frac{5}{9}$
- B. $2 \frac{2}{5}$ $\frac{16}{5}$ 4 $\frac{48}{10}$ $\frac{56}{10}$ $6 \frac{2}{5}$
- C. $3 \frac{5}{9}$ $\frac{37}{9}$ $4 \frac{4}{6}$ $\frac{47}{9}$ $5 \frac{7}{9}$ $6 \frac{1}{3}$



VF
HW/Ext

8. Paul and Mary are discussing the number that will come next in the sequence.



Paul

I think the next number in the sequence will be 1.

I think the next number in the sequence will be $\frac{3}{4}$.



Mary

- $\frac{42}{8}$ $4 \frac{8}{16}$ $\frac{15}{4}$ 3 $2 \frac{4}{16}$ $\frac{12}{8}$

Who is correct?



VF
HW/Ext

9. Find your way through the maze by finding the number sequence.

<p>Start →</p> <p>$6 \frac{2}{8}$</p>	$5 \frac{8}{16}$	$\frac{38}{8}$	$\frac{30}{8}$	$2 \frac{5}{8}$
	$4 \frac{3}{16}$	4	$\frac{26}{8}$	$2 \frac{8}{16}$
	$3 \frac{4}{8}$	$3 \frac{5}{8}$	$2 \frac{8}{16}$	2
	$\frac{30}{16}$	2	$1 \frac{6}{8}$	$\frac{8}{8}$
				<p>→ Finish</p>



RPS
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Homework/Extension Number Sequences

Developing

1. **B**
2. **Nadia is correct.**

3.

Start →	$5 \frac{6}{8}$	$5 \frac{7}{8}$	6	$6 \frac{3}{8}$
$5 \frac{5}{8}$ →	$5 \frac{5}{8}$	$5 \frac{6}{8}$	$6 \frac{1}{8}$	$6 \frac{2}{8}$
	$5 \frac{4}{8}$	$6 \frac{4}{8}$	$6 \frac{2}{8}$	$6 \frac{1}{8}$
	$6 \frac{7}{8}$	7	$6 \frac{3}{8}$	$6 \frac{4}{8}$ → Finish

Expected

4. **A**
5. **They are both correct.**

6.

Start →	$3 \frac{6}{7}$	$4 \frac{4}{14}$	$4 \frac{1}{7}$	$5 \frac{10}{14}$
$3 \frac{4}{7}$ →	$4 \frac{2}{14}$	$4 \frac{3}{7}$	$4 \frac{12}{14}$	$5 \frac{7}{7}$
	$4 \frac{8}{14}$	$4 \frac{5}{7}$	$5 \frac{1}{7}$	$5 \frac{12}{14}$ → Finish
	$5 \frac{4}{7}$	5	$5 \frac{4}{14}$	$5 \frac{4}{7}$

Greater Depth

7. **C is the odd one out because the numerators increase by 5 whereas A and B increase by 4.**
8. **Mary is correct.**

9.

Start →	$5 \frac{8}{16}$	$\frac{38}{8}$	$\frac{30}{8}$	$2 \frac{5}{8}$
$6 \frac{2}{8}$ →	$4 \frac{3}{16}$	4	$\frac{26}{8}$	$2 \frac{8}{16}$
	$3 \frac{4}{8}$	$3 \frac{5}{8}$	$2 \frac{8}{16}$	2
	$\frac{30}{16}$	2	$1 \frac{6}{8}$	$\frac{8}{8}$ → Finish