

WA5MNAUN6

Understanding number

Core + Challenge

NAPLAN-style

Mixed Numerals

I can show mixed numerals with shapes and number lines, and change them to and from improper fractions.

Name: _____ Date: _____ Score: _____ / 56

Key idea

A **mixed numeral** has a whole number and a fraction. $1\frac{2}{5}$ means **1 whole** and $\frac{2}{5}$ more.

An **improper fraction** has a numerator that is the same as or bigger than its denominator, like $\frac{7}{5}$.

To change $\frac{7}{5}$: 5 fifths make 1 whole, and 2 fifths are left over. So $\frac{7}{5} = 1\frac{2}{5}$.

To change back: 1 whole = 5 fifths, and $5 + 2 = 7$ fifths. So $1\frac{2}{5} = \frac{7}{5}$.

$$\frac{7}{5} = 1 \text{ whole and } \frac{2}{5}$$



$$1\frac{2}{5} \text{ is 2 fifths past 1}$$

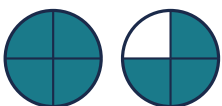


A Warm up *shade, write and locate mixed numerals*

/ 16 marks

Write the **mixed numeral** for the shaded amount. 1 mark each.

1



2



3

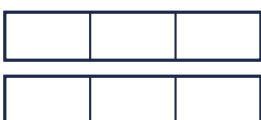


4



Shade the shapes to show each mixed numeral. 1 mark each.

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



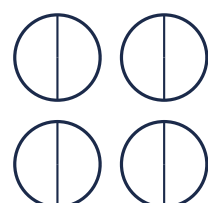
6 Shade $2\frac{3}{4}$



7 Shade $1\frac{1}{5}$



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



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Write each improper fraction as a mixed numeral. 1 mark each.

9 $\frac{9}{4} = \square$

10 $\frac{9}{2} = \square$

11 $\frac{13}{5} = \square$

12 $\frac{10}{3} = \square$

Write the **mixed numeral** at each dot. 1 mark each.

13



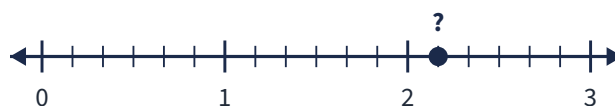
14



15



16

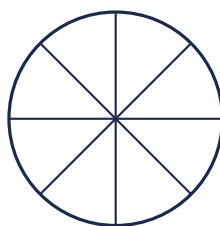
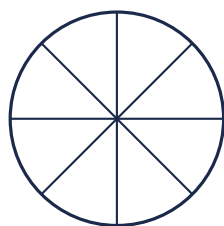
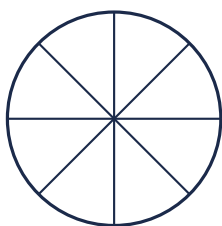


B

Practise use the skill

/ 21 marks

- 1 At a party, each pizza is cut into **8** equal slices. The children eat **19** slices. Shade 19 slices. Write the amount of pizza eaten as an improper fraction **and** as a mixed numeral. [3 marks]



Answer: _____

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2 Complete the table.

[3 marks]

Words	Improper fraction	Mixed numeral
eleven quarters		
	$\frac{8}{3}$	
		$3\frac{1}{5}$

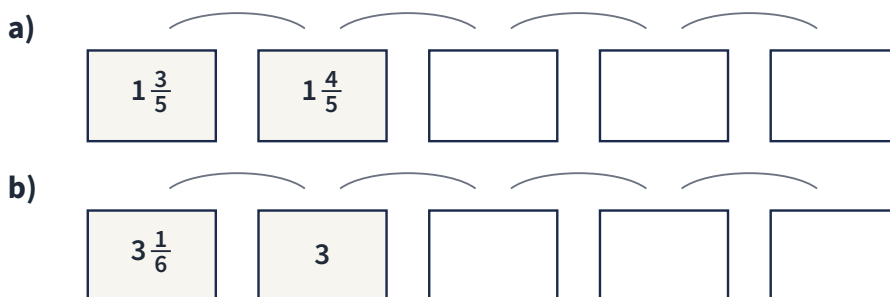
3 Count in quarters. Write the missing **mixed numerals** in the boxes.

[2 marks]



4 Keep counting. Fill in the empty boxes. **a)** Count **on** in fifths. **b)** Count **back** in sixths.

[2 marks]



5 Ella bakes **17** muffins for the school fete. Each tray holds **6** muffins. Shade the muffins in the trays. How many trays does she fill, as a **mixed numeral**? How many more muffins would fill 3 trays?

[3 marks]



Answer: _____

6 Mark and label these on the number line: $\frac{3}{5}$, $1\frac{3}{5}$, $2\frac{1}{5}$, $\frac{13}{5}$

[2 marks]



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- 7 Circle the correct answer. **a)** Which is the same as $3\frac{1}{4}$? **b)** Which is **between** 2 and 3? [2 marks]

a) $\frac{31}{4}$ $\frac{13}{4}$ $\frac{7}{4}$ $\frac{12}{4}$

b) $\frac{11}{6}$ $\frac{17}{6}$ $\frac{19}{6}$ $\frac{12}{6}$

- 8 Write these from **smallest** to **largest**. Use the number line to help. [2 marks]
 $2\frac{1}{3}$, $\frac{5}{3}$, $1\frac{1}{3}$, $\frac{8}{3}$



Answer: _____

- 9 The school cross-country loop is $\frac{1}{2}$ km long. Year 5 students run **5** loops. Draw the loops as jumps on the number line. How far do they run? Write it as an improper fraction **and** a mixed numeral. [2 marks]



Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Jack says $2\frac{1}{4}$ is the same as $\frac{21}{4}$. Do you agree with Jack? Explain. You may draw a diagram. [2 marks]

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- 2 **True or false?** “ $\frac{12}{4}$ is a whole number.” Explain how you know. [2 marks]

- 3 **Always, sometimes or never true?** “An improper fraction can be written as a mixed numeral.” Circle one. Give examples. [2 marks]

Always

Sometimes

Never

- 4 Which is the **odd one out**? $\frac{11}{4}$, $2\frac{3}{4}$, $1\frac{7}{4}$, $3\frac{1}{4}$ Explain. [2 marks]

- 5 Explain how to change $\frac{17}{5}$ into a mixed numeral **without** drawing a diagram. [2 marks]

D

Challenge *stretch yourself*

/ 9 marks

- 1 Use the digits **2**, **3** and **5** once each to make a mixed numeral, like $\square \frac{\square}{\square}$. The fraction part must be less than 1. Find **all** the mixed numerals you can make. Write the **largest** one as an improper fraction. [3 marks]

Answer: _____

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- 2 At the fete, each apple pie is cut into 6 equal slices. After 13 slices are sold, there are $2\frac{5}{6}$ pies left. How many whole pies were there at the start? Show your working. [3 marks]

Answer: _____

- 3 A frog starts at 0 and jumps $\frac{3}{4}$ each time. **a)** Where is it after 5 jumps? Write a mixed numeral. **b)** After how many jumps does it **first** land on a whole number? **c)** Does it land on 6? After how many jumps? [3 marks]



Answer: _____

How did I go?

Warm up ___ / 16 Practise ___ / 21 Think it through ___ / 10 Challenge ___ / 9 **Total ___ / 56**

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