

WA5MNAUN6

Understanding number

Core + Challenge

NAPLAN-style

Fractions on a Number Line

I can count by unit fractions and locate fractions on a number line, including past 1.

Name: _____ Date: _____ Score: _____ / 57

Key idea

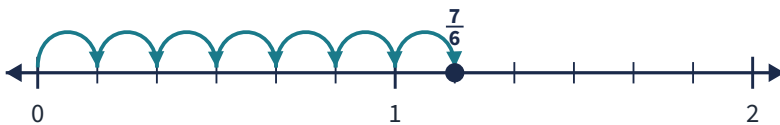
A **unit fraction** has 1 on top, like $\frac{1}{6}$. It is one of 6 **equal** parts of a whole.

On a number line, split each whole into equal **spaces**. Count the **spaces**, not the tick marks. Each space is one unit fraction.

Count by sixths: $\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}, \frac{6}{6}$. $\frac{6}{6}$ is **1** whole. Keep counting past 1: $\frac{7}{6}, \frac{8}{6} \dots$

Example: the dot is **7 jumps** of $\frac{1}{6}$ from 0, so it is at $\frac{7}{6}$. That is more than 1.

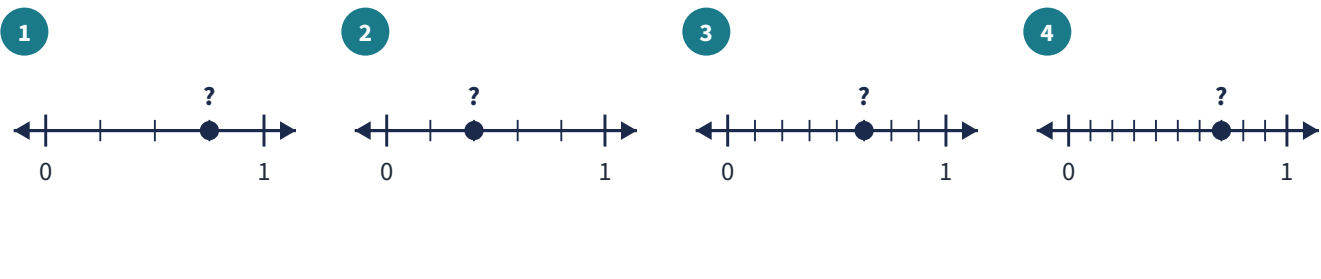
Counting in sixths: 7 jumps of one sixth



A Warm up *count, read and mark fractions*

/ 16 marks

What fraction is at the dot? 1 mark each.



Mark the fraction with a dot on the number line. 1 mark each.



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Keep counting. Write the next **two** fractions. 1 mark each (both correct).

9 $\frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \square, \square$

10 $\frac{5}{3}, \frac{6}{3}, \frac{7}{3}, \square, \square$

11 $\frac{9}{10}, \frac{8}{10}, \frac{7}{10}, \square, \square$

12 $\frac{12}{5}, \frac{11}{5}, \frac{10}{5}, \square, \square$

Write the missing fraction in the box. 1 mark each.

13



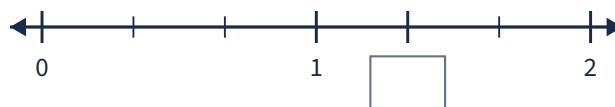
14



15



16



B Practise *use the skill*

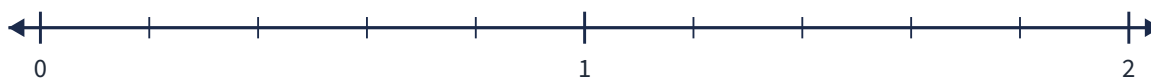
/ 22 marks

1 Write the fraction at each letter. [3 marks]



Answer: _____

2 Mark and label these fractions on the number line: $\frac{1}{5}, \frac{4}{5}, \frac{6}{5}, \frac{9}{5}$ [2 marks]



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- 3 A frog starts at 0 and makes jumps of $\frac{1}{3}$. Draw 5 jumps on the number line. Where does the frog land? Is it more or less than 1? [2 marks]



Answer: _____

- 4 A walking trail at Kings Park is 2 km long. The first marker post is $\frac{1}{4}$ km from the start, and there is a post every $\frac{1}{4}$ km after that. Ava stops at the 7th post. Mark where Ava stops. How far has she walked? How much further is it to the end? [3 marks]



Answer: _____

- 5 Only 0 and 1 are labelled on this number line. What fraction is each space worth? Write the fraction at A and at B. [3 marks]



Answer: _____

- 6 Circle the fraction at the dot. [2 marks]



a) ☐ $\frac{5}{7}$ ☐ $\frac{5}{6}$ ☐ $\frac{6}{5}$ ☐ $\frac{1}{5}$



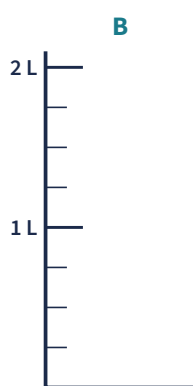
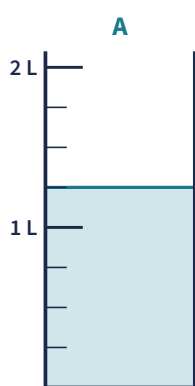
b) ☐ $\frac{7}{10}$ ☐ $\frac{7}{5}$ ☐ $\frac{5}{7}$ ☐ $\frac{2}{7}$

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- 7 Complete the table. [3 marks]

Words	Fraction	Less than 1, equal to 1 or more than 1?
three quarters		
	$\frac{5}{3}$	
eight eighths		

- 8 Each jug is marked in quarters of a litre. **a)** How much juice is in jug A? **b)** Shade jug B to show $\frac{3}{4}$ L. [2 marks]



Answer: _____

- 9 Count **back** in thirds from 3. Write the missing fractions in the boxes. [2 marks]



C Think it through *explain your thinking*

/ 10 marks

- 1 Leo says the dot is at $\frac{3}{5}$ “because there are 5 marks on the line”. Do you agree with Leo? Explain. [2 marks]



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- 2 **True or false?** “ $\frac{9}{4}$ is between 1 and 2 on a number line.” Explain how you know. [2 marks]

- 3 **Always, sometimes or never true?** “A fraction with a numerator bigger than its denominator is more than 1.” Circle one. Explain with an example. [2 marks]

Always

Sometimes

Never

- 4 Which is the **odd one out**? $\frac{7}{3}$, $\frac{9}{5}$, $\frac{11}{4}$, $\frac{5}{2}$ Explain. [2 marks]

- 5 Mia wants to mark $\frac{7}{8}$ on a number line from 0 to 1. Explain a quick way to find it **without** counting 7 spaces from 0. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1 The spaces on this number line are equal. **a)** What is each space worth? **b)** Mark where **1** is. **c)** What number is at A? [3 marks]



Answer: _____

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- 2 Find **all** the fractions with denominator **4** that are **between** 1 and 3 on a number line (not 1 or 3). Which one is a whole number? Explain how you know you have them all. [3 marks]

Answer: _____

- 3 Sam starts at a number. He makes **7** jumps of $\frac{1}{3}$ forwards and lands on $\frac{11}{3}$. **a)** [3 marks]
Where did he start? **b)** How many more jumps of $\frac{1}{3}$ does he need to reach **5**? Use the number line.



Answer: _____

How did I go?

Warm up ___ / 16 Practise ___ / 22 Think it through ___ / 10 Challenge ___ / 9 **Total ___ / 57**

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