

WA5MNACN2

Calculating with number

Core + Challenge

NAPLAN-style

Adding and Subtracting Fractions

I can add and subtract fractions with the same denominator, using diagrams and number lines.

Name: _____ Date: _____ Score: _____ / 56

Key idea

When the denominators are the **same**, the parts are the same size. Add or subtract the **numerators** (the number of parts).

The denominator **stays the same**: 2 sevenths + 3 sevenths = 5 sevenths. Never add the denominators.

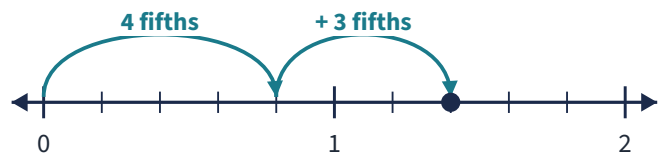
If the answer is more than 1, you can write it as a **mixed numeral**.

Example: $\frac{4}{5} + \frac{3}{5} = \frac{7}{5}$. 5 fifths make 1 whole, with 2 fifths left, so $\frac{7}{5} = 1\frac{2}{5}$.

$$\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5}$$



On a number line



A

Warm up *shade, cross out and jump*

/ 16 marks

Shade more parts to **add**. Write the answer. 1 mark each.

1 $\frac{3}{8} + \frac{2}{8} = \square$



2 $\frac{1}{5} + \frac{3}{5} = \square$



3 $\frac{2}{6} + \frac{3}{6} = \square$



4 $\frac{4}{10} + \frac{5}{10} = \square$



Cross out parts to **subtract**. Write the answer. 1 mark each.

5 $\frac{7}{8} - \frac{3}{8} = \square$



6 $\frac{5}{6} - \frac{4}{6} = \square$



7 $\frac{9}{10} - \frac{6}{10} = \square$



8 $\frac{4}{5} - \frac{2}{5} = \square$



Adding and Subtracting Fractions · WA5MNACN2

Draw the jump from the dot. Write the answer. 1 mark each.

9 $\frac{3}{4} + \frac{2}{4} = \square$



10 $\frac{4}{3} - \frac{2}{3} = \square$



11 $\frac{7}{6} + \frac{3}{6} = \square$



12 $\frac{9}{5} - \frac{4}{5} = \square$



Work these out. 1 mark each.

13 $\frac{5}{9} + \frac{3}{9} = \square$

14 $\frac{11}{12} - \frac{4}{12} = \square$

15 $\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \square$

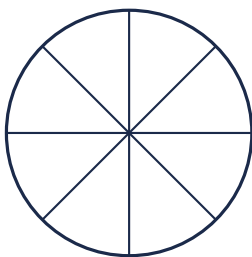
16 $1 - \frac{3}{8} = \square$

B Practise use the skill

/ 21 marks

- 1 A pizza is cut into 8 equal slices. Ben eats $\frac{3}{8}$ of the pizza and his sister eats $\frac{2}{8}$. [3 marks]

Shade the pizza they eat. **a)** How much of the pizza do they eat altogether? **b)** How much is left?



Answer: _____

- 2 Shade the bars to work out $\frac{5}{6} + \frac{4}{6}$. Write the answer as an improper fraction **and** [2 marks]
as a mixed numeral.



Answer: _____

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- 3 At Kings Park, Ava walks $\frac{3}{4}$ km to the lookout. Then she walks $\frac{3}{4}$ km to the playground. Draw both jumps on the number line. How far does she walk altogether? Write a mixed numeral. [2 marks]



Answer: _____

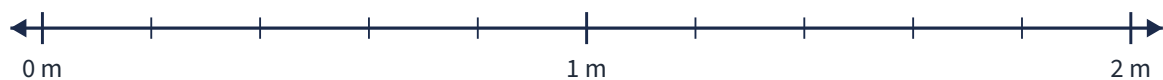
- 4 Write the missing numerator in each box. [3 marks]

a) $\frac{\square}{9} + \frac{4}{9} = \frac{7}{9}$ b) $\frac{8}{10} - \frac{\square}{10} = \frac{5}{10}$ c) $\frac{3}{5} + \frac{\square}{5} = 1$

- 5 Noah practises the piano. Complete the table to show his **total** practice time after each day. [2 marks]

Day	Time (hours)	Total so far (hours)
Monday	$\frac{3}{4}$	$\frac{3}{4}$
Tuesday	$\frac{2}{4}$	
Wednesday	$\frac{3}{4}$	

- 6 Lily has $1\frac{3}{5}$ m of ribbon. She cuts off $\frac{4}{5}$ m to wrap a present. How much ribbon is left? Use the number line. [2 marks]



Answer: _____

- 7 Circle the correct answer. a) $\frac{7}{8} - \frac{2}{8} = ?$ b) $\frac{2}{3} + \frac{2}{3} = ?$ [2 marks]

- a) $\frac{4}{8}$ $\frac{5}{8}$ $\frac{9}{8}$ $\frac{5}{16}$
- b) $\frac{4}{6}$ $\frac{4}{3}$ $\frac{2}{3}$ $\frac{4}{9}$

Adding and Subtracting Fractions · WA5MNACN2

- 8 For the school fete, Jess fills a 1 litre jug. She pours in $\frac{3}{10}$ L of orange juice and $\frac{5}{10}$ L of lemonade. Shade the bar: mark the juice **J** and the lemonade **L**. How much drink is in the jug? How much more will fill it? [3 marks]

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Answer: _____

- 9 Draw a line to join each calculation to its answer. [2 marks]

$\frac{3}{7} + \frac{3}{7}$ •	• $\frac{2}{7}$
$\frac{6}{7} - \frac{4}{7}$ •	• $1\frac{1}{7}$
$\frac{5}{7} + \frac{4}{7}$ •	• $\frac{6}{7}$
$\frac{9}{7} - \frac{1}{7}$ •	• $1\frac{2}{7}$

C Think it through *explain your thinking*

/ 10 marks

- 1 Sam says $\frac{2}{5} + \frac{1}{5} = \frac{3}{10}$. Do you agree with Sam? Explain. You may draw a diagram. [2 marks]

- 2 True or false? " $\frac{5}{8} + \frac{2}{8}$ is more than 1." Explain. [2 marks]

Adding and Subtracting Fractions · WA5MNACN2

- 3 **Always, sometimes or never true?** “If you add two fractions that are each less than 1, the answer is less than 1.” Circle one. Give examples. [2 marks]

☐ Always☐ Sometimes☐ Never

- 4 Which is the **odd one out**? $\frac{2}{9} + \frac{5}{9}$, $\frac{8}{9} - \frac{1}{9}$, $\frac{3}{9} + \frac{3}{9}$, $\frac{10}{9} - \frac{3}{9}$ Explain. [2 marks]

- 5 Explain how you know that $\frac{6}{7} + \frac{5}{7}$ is **more than 1**, without working out the answer. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1 Find **all** the pairs of fractions with denominator **8** that add to $\frac{7}{8}$. Each numerator must be a whole number from 1 upwards. Swapping the order does **not** make a new pair. How do you know you have found them all? [3 marks]

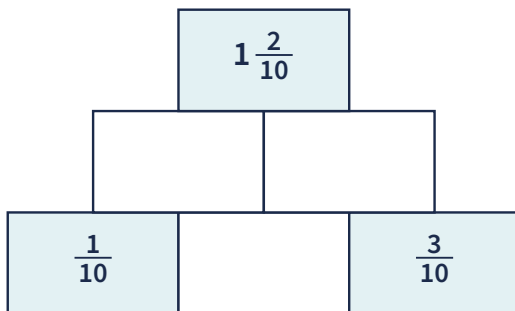
Answer: _____

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- 2 Ella starts the day with a **full** 2 litre bottle of water. She drinks $\frac{3}{4}$ L in the morning [3 marks] and $\frac{2}{4}$ L at lunch. At the end of the day, $\frac{1}{4}$ L is left. How much did she drink in the **afternoon**? Show your working.

Answer: _____

- 3 In this pyramid, each block is the **sum** of the two blocks below it. Fill in the empty blocks. [3 marks]

**How did I go?**

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

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