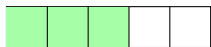
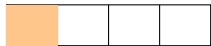


## Fractions: Adding & Subtracting

## Starter 10



$\frac{1}{2}$



$\frac{1}{4}$

1. Fully simplify:  $\frac{12}{16}$

2. Which is larger:  $\frac{3}{7}$  or  $\frac{3}{9}$ ?

3. Convert  $\frac{11}{4}$  to a mixed number.

4. Complete the addition represented by the bars to the left:

$$\frac{?}{5} + \frac{?}{5} = \frac{3}{?}$$

5. Calculate:

$$\frac{1}{7} + \frac{3}{7}$$

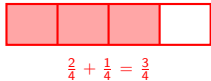
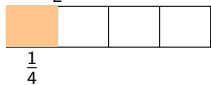
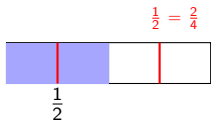
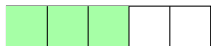
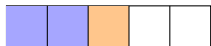
$$\frac{5}{9} + \frac{2}{9}$$

6. To add  $\frac{1}{2} + \frac{1}{4}$ , what must you do first? Can you draw a picture to demonstrate?

7. Calculate:  $\frac{1}{5} + \frac{1}{5}$

8. Calculate:  $\frac{1}{5} + \frac{1}{5}$

# Starter 10



1. Fully simplify:  $\frac{12}{16} = \frac{3}{4}$

2. Which is larger:  $\frac{3}{7}$  or  $\frac{3}{9}$ ?  $\frac{3}{7}$

3. Convert  $\frac{11}{4}$  to a mixed number.  $= 2\frac{3}{4}$

4. Complete the addition represented by the bars to the left:

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

5. Calculate:

$$\frac{1}{7} + \frac{3}{7} \quad \frac{5}{9} + \frac{2}{9}$$

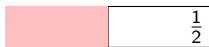
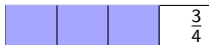
$$= \frac{4}{7}, \frac{7}{9}$$

6. To add  $\frac{1}{2} + \frac{1}{4}$ , what must you do first? Can you draw a picture to demonstrate? **Find a common denominator:**  $\frac{1}{2} = \frac{2}{4}$ , so  $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$ .

7. Calculate:  $\frac{1}{2} + \frac{1}{2} = \frac{3}{2}$

8. Calculate:  $\frac{1}{2} + \frac{1}{2} = \frac{7}{10}$

# Starter 11



1. Write 3 fractions equivalent to  $\frac{2}{3}$ .

2. Order smallest to largest:  $\frac{1}{8}$ ,  $\frac{1}{2}$ ,  $\frac{1}{12}$

3. Convert  $2\frac{3}{7}$  to an improper fraction.

4. Complete the subtraction represented by the bars to the left:

$$\frac{4}{6} - \frac{?}{6} = \frac{?}{6} = \frac{1}{?}$$

5. Calculate:

$$\frac{7}{10} - \frac{3}{10} \qquad \frac{8}{9} - \frac{5}{9}$$

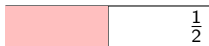
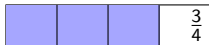
6. Use the bars to work out  $\frac{3}{4} - \frac{1}{2}$ .

7. Calculate:  $\frac{5}{6} - \frac{1}{4}$

8. Calculate:  $\frac{7}{8} - \frac{2}{3}$

9. Order smallest to largest:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{12}$

# Starter 11



1. Write 3 fractions equivalent to  $\frac{2}{3}$ .  $\frac{4}{6}, \frac{6}{9}, \frac{8}{12}$

2. Order smallest to largest:  $\frac{1}{8}, \frac{1}{2}, \frac{1}{12}$   $\frac{1}{12} < \frac{1}{8} < \frac{1}{2}$

3. Convert  $2\frac{3}{7}$  to an improper fraction.  $= \frac{17}{7}$

4. Complete the subtraction represented by the bars to the left:

$$\frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$$

5. Calculate:

$$\frac{7}{10} - \frac{3}{10} \quad \frac{8}{9} - \frac{5}{9}$$

$$= \frac{2}{5}, \frac{1}{3}$$

6. Use the bars to work out  $\frac{3}{4} - \frac{1}{2}$ .  $= \frac{1}{4}$

7. Calculate:  $\frac{5}{6} - \frac{1}{4} = \frac{7}{12}$  8. Calculate:  $\frac{7}{8} - \frac{2}{3} = \frac{5}{24}$

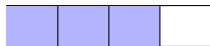
9. Order smallest to largest:  $\frac{3}{8}, \frac{1}{2}, \frac{5}{12}$   $\frac{3}{8} < \frac{5}{12} < \frac{1}{2}$

# Starter 12

1.  $\frac{2}{5} + \frac{1}{5}$

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

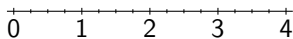
3. Simplify:  $\frac{36}{48}$



+



=



4. Fill in the blanks using the diagram:

$$\frac{?}{4} + 1\frac{?}{?} = \frac{?}{4} + \frac{?}{4} = \frac{?}{4} = ?\frac{1}{?}$$

5.

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

6.

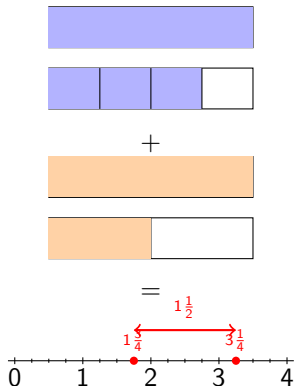
$$3\frac{1}{4} + 1\frac{1}{2}$$

7. Mark  $1\frac{3}{4}$  and  $3\frac{1}{4}$  on the number line. What is the difference? How else could you work this out?

8. Calculate:  $2^2 + 1^3$  Calculate:  $1^3 + 3^1$

# Starter 12

$$1. \frac{2}{5} + \frac{1}{5} = \frac{3}{5} \quad 2. \frac{3}{4} - \frac{1}{2} = \frac{1}{4} \quad 3. \text{Simplify: } \frac{36}{48} = \frac{3}{4}$$



4. Fill in the blanks using the diagram:

$$1\frac{3}{4} + 1\frac{1}{2} = \frac{7}{4} + \frac{6}{4} = \frac{13}{4} = 3\frac{1}{4}$$

5.

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

$$= 3\frac{2}{3}$$

6.

$$3\frac{1}{4} + 1\frac{1}{2}$$

$$= 4\frac{3}{4}$$

7. Mark  $1\frac{3}{4}$  and  $3\frac{1}{4}$  on the number line. What is the difference? How else could you work this out? Difference =  $\frac{3}{2} = 1\frac{1}{2}$ ; work out as  $3\frac{1}{4} - 1\frac{3}{4} = \frac{13}{4} - \frac{7}{4} = \frac{6}{4} = \frac{3}{2}$ .

8. Calculate:  $2\frac{2}{3} + 1\frac{3}{4}$  Calculate:  $1\frac{3}{4} - 3\frac{1}{2}$

# Starter 13



1. Which is greater:  $2\frac{1}{3}$  or  $2\frac{2}{5}$ ?
2. Convert  $\frac{23}{6}$  to a mixed number.
3. Consider the diagram on the left, fill in the blanks to demonstrate subtraction using improper fractions:

$$3\frac{1}{4} - 1\frac{3}{4} = \frac{?}{4} - \frac{?}{4} = \frac{?}{4} = \frac{?}{?}$$

4.

$$3\frac{3}{5} - 1\frac{1}{5}$$

5.

$$4\frac{5}{6} - 2\frac{1}{6}$$

6.

$$1\frac{2}{3} + 2\frac{1}{4}$$

7.

$$4\frac{1}{4} - 1\frac{1}{2}$$

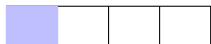
8.

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

9.

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

## Starter 13



1. Which is greater:  $2\frac{1}{3}$  or  $2\frac{2}{5}$ ?  $2\frac{2}{5}$

2. Convert  $\frac{23}{6}$  to a mixed number.  $= 3\frac{5}{6}$

3. Consider the diagram on the left, fill in the blanks to demonstrate subtraction using improper fractions:

$$3\frac{1}{4} - 1\frac{3}{4} = \frac{13}{4} - \frac{7}{4} = \frac{6}{4} = 1\frac{2}{4}$$

4.

$$3\frac{3}{5} - 1\frac{1}{5}$$

$$= 2\frac{2}{5}$$

5.

$$4\frac{5}{6} - 2\frac{1}{6}$$

$$= 2\frac{2}{3}$$

6.

$$1\frac{2}{3} + 2\frac{1}{4}$$

$$= 3\frac{11}{12}$$

7.

$$4\frac{1}{4} - 1\frac{1}{2}$$

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

8.

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

9.

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

# Starter 14

1. Fully simplify:  $\frac{15}{20}$

2. Fully simplify:  $\frac{72}{96}$

3. Use the fraction wall to fill in the blanks:

$$\frac{1}{2} + \frac{?}{6} = 1 \quad \frac{?}{3} + \frac{?}{6} = 1$$

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

5.  $4\frac{1}{5} - 1\frac{3}{4}$

## Fraction wall

1

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{6}$

$\frac{1}{6}$

$\frac{1}{6}$

$\frac{1}{6}$

$\frac{1}{6}$

$\frac{1}{6}$

|                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|

6. Maya says: " $\frac{1}{2} + \frac{1}{3} = \frac{2}{5}$ ". Explain the mistake and find the correct answer.

7. Amir eats  $\frac{3}{8}$ , Beth eats  $\frac{1}{4}$ , Cal eats  $\frac{1}{3}$  of a pizza.  
What fraction is left?

8. Fill in the blanks:  $3\frac{1}{4} + \underline{\quad} = 5\frac{1}{6}$

9. True or false?  $\frac{a}{b} + \frac{a}{c} = \frac{2a}{b+c}$ . Can you explain your

## Starter 14

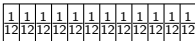
1. Fully simplify:  $\frac{15}{20} = \frac{3}{4}$     2. Fully simplify:  $\frac{72}{96} = \frac{3}{4}$

3. Use the fraction wall to fill in the blanks:

$$\frac{1}{2} + \frac{3}{6} = 1 \qquad \frac{1}{3} + \frac{4}{6} = 1$$

4.  $2\frac{3}{4} + 1\frac{2}{3} = 4\frac{5}{12}$       5.  $4\frac{1}{5} - 1\frac{3}{4} = 2\frac{9}{20}$

## Fraction wall



6. Maya says: " $\frac{1}{2} + \frac{1}{3} = \frac{2}{5}$ ". Explain the mistake and find the correct answer. She added the denominators too; use a common denominator:  $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$ .

7. Amir eats  $\frac{3}{8}$ , Beth eats  $\frac{1}{4}$ , Cal eats  $\frac{1}{3}$  of a pizza.  
What fraction is left?  $\frac{1}{24}$

8. Fill in the blanks:  $3\frac{1}{4} + 1\frac{11}{12} = 5\frac{1}{6}$

9. True or false?  $\frac{a}{b} + \frac{a}{c} = \frac{2a}{b+c}$ . Can you explain your