

Maths answers – Week 1

Day 1

Lesson 4: Adding fractions (1)

→ pages 77–79

1. a) $\frac{1}{3} = \frac{2}{6}$
 $\frac{5}{6} + \frac{1}{3} = \frac{5}{6} + \frac{2}{6}$
 $= \frac{7}{6} = 1\frac{1}{6}$

b) $\frac{1}{2} = \frac{5}{10}$
 $\frac{1}{2} + \frac{9}{10} = \frac{5}{10} + \frac{9}{10}$
 $= \frac{14}{10} = 1\frac{2}{5}$

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

3. a) $\frac{3}{4} = \frac{6}{8}$
 $\frac{3}{8} + \frac{3}{4} = \frac{3}{8} + \frac{6}{8} = \frac{9}{8} = 1\frac{1}{8}$

b) $\frac{2}{3} = \frac{8}{12}$
 $\frac{5}{12} + \frac{2}{3} = \frac{5}{12} + \frac{8}{12} = \frac{13}{12} = 1\frac{1}{12}$

4. The total amount of juice in both bottles is $1\frac{1}{10}$ litres.

5. a) $1\frac{1}{4}$

b) $1\frac{8}{15}$

6. a) $\frac{11}{12}$

c) $\frac{7}{12}$

e) $\frac{5}{12}$

b) $\frac{3}{4}$

d) $\frac{7}{12}$

f) $\frac{1}{4}$

Reflect

Answers may vary. The denominators have been added, which is incorrect. Instead, $\frac{2}{3}$ can be written as $\frac{6}{9}$ and added to $\frac{7}{9}$ to get $\frac{13}{9}$ or $1\frac{4}{9}$.

Day 2

Lesson 5: Adding fractions (2)

→ pages 80–82

1. $2 + 1 = 3$

$\frac{1}{4} = \frac{2}{8}$

$\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8}$

Olivia walks $3\frac{5}{8}$ km in total.

2. $3 + 2 = 5$

$\frac{3}{5} = \frac{6}{10}$

$\frac{3}{5} + \frac{9}{10} = \frac{6}{10} + \frac{9}{10} = \frac{15}{10} = 1\frac{1}{2}$

So, $3\frac{3}{5} + 2\frac{9}{10} = 6\frac{1}{2}$

3. a) $1\frac{2}{3}$

b) $4\frac{1}{4}$

c) If you move 2 wholes from $3\frac{2}{3}$ to $\frac{7}{12}$, this changes the calculation in b) to $2\frac{7}{12} + 1\frac{2}{3}$ but the total will stay the same.

4. a) $3\frac{8}{9}$

b) $6\frac{8}{9}$

The fractional part of the answer in b) is the same as in a) as children are adding the same fractional parts together. Just the whole number part is different as children are adding different whole numbers.

5. $3\frac{2}{3} + 5\frac{5}{6} = 9\frac{1}{2}$ or $5\frac{2}{3} + 3\frac{5}{6} = 9\frac{1}{2}$

6. $\frac{5}{6}$

Reflect

The fractional parts have already been added, so just add on the whole parts ($4 + 3$) to make $7\frac{5}{6}$.

Day 3

Lesson 6: Adding fractions (3)

→ pages 83–85

- $2\frac{1}{3} = \frac{7}{3}$ $1\frac{2}{9} = \frac{11}{9}$
 $\frac{7}{3} = \frac{21}{9}$
 $\frac{21}{9} + \frac{11}{9} = \frac{32}{9}$
 $= 3\frac{5}{9}$
 So, $2\frac{1}{3} + 1\frac{2}{9} = 3\frac{5}{9}$
- $2\frac{7}{8}$
- a) $2\frac{7}{8}$ c) $5\frac{11}{20}$
 b) $6\frac{1}{5}$ d) $5\frac{3}{16}$
- The total weight of the two boxes is $4\frac{1}{4}$ kg.

5. Yes, children should agree with Kate because if they convert these fractions to improper fractions before adding, then the numbers will get very big and they are more likely to make a mistake. Whereas adding wholes and then parts will keep the numbers that they are working with smaller.

- $1\frac{5}{6} + 1\frac{7}{12} = \frac{11}{6} + \frac{19}{12} = \frac{22}{12} + \frac{19}{12} = \frac{41}{12} = 3\frac{5}{12}$
- a) Max has finished on $9\frac{5}{16}$
 b) Max jumped $2\frac{11}{16}$ more to land on 12.

Reflect

Children's preference will vary. Encourage children to use the most efficient method of adding wholes, finding a common denominator for the parts, adding parts and then adding the wholes back on, instead of converting to improper fractions first.

Day 4

Lesson 7: Subtracting fractions (I)

→ pages 86–88

- $\frac{7}{9} - \frac{5}{9} = \frac{2}{9}$
So $2\frac{7}{9} - \frac{5}{9} = 2\frac{2}{9}$
- a) $\frac{1}{4} = \frac{2}{8}$
 $3\frac{7}{8} - \frac{1}{4} = 3\frac{7}{8} - \frac{2}{8}$
 $3\frac{5}{8}$
 b) $\frac{1}{2} = \frac{4}{8}$
 $3\frac{7}{8} - \frac{1}{2} = 3\frac{7}{8} - \frac{4}{8}$
 $3\frac{3}{8}$
 c) $3\frac{7}{8} - 1 = 2\frac{7}{8}$ $3\frac{7}{8} - \frac{7}{8} = 3$
- There are $2\frac{1}{4}$ pies left.
- a) $2\frac{1}{4}$ c) $2\frac{3}{8}$
 b) $1\frac{1}{5}$ d) $1\frac{1}{10}$
- a) $\frac{1}{2}$ c) 4 (or $3\frac{9}{9}$)
 b) $3\frac{7}{9}$ d) $\frac{7}{12}$
- The second show lasts $2\frac{1}{8}$ hours.

Reflect

Explanations will vary.

$\frac{1}{10}$ is smaller than $\frac{1}{5}$ so $\frac{3}{10}$ is smaller than $\frac{3}{5}$. Therefore $\frac{3}{10}$ can be subtracted from $\frac{3}{5}$ without a need to exchange one of the whole numbers, so the answer will be more than 2.

Day 5

Lesson 8: Subtracting fractions (2)

→ pages 89–91

- a) $3\frac{2}{5} = 2\frac{7}{5}$
 $2\frac{7}{5} - \frac{4}{5} = 2\frac{3}{5}$
 So $3\frac{2}{5} - \frac{4}{5} = 2\frac{3}{5}$
 b) $2\frac{3}{8} = 1\frac{11}{8}$
 $1\frac{11}{8} - \frac{7}{8} = 1\frac{4}{8}$
 So $2\frac{3}{8} - \frac{7}{8} = 1\frac{1}{2}$
- Missing fractions:
 - $\frac{3}{7}$ c) $\frac{7}{7}$
 - $\frac{5}{7}$ d) $\frac{7}{7}$
- a) $4\frac{1}{4} = 4\frac{2}{8} = 3\frac{10}{8}$
 $3\frac{10}{8} - \frac{7}{8} = 3\frac{3}{8}$
 So, $4\frac{1}{4} - \frac{7}{8} = 3\frac{3}{8}$
 b) $1\frac{7}{10}$
- a) $4\frac{5}{12}$ c) $6\frac{5}{7}$
 b) $4\frac{5}{12}$ d) $3\frac{13}{24}$
- There are $1\frac{5}{8}$ sandwiches left.
- Triangle = $\frac{7}{12}$
 Circle = $1\frac{1}{12}$

Reflect

Explanations will vary. $\frac{9}{20}$ is more than $\frac{2}{5}$ so this means that one of the wholes in 2 will need to be exchanged into 20ths in order for the parts to be subtracted.