

Year 5
Week 10
Lesson 1 - Adding fractions

Challenge 1

Add up these fractions by following the SC.

1. $\frac{2}{3} + \frac{5}{9} = \frac{11}{9} = 1 \text{ and } \frac{2}{9}$
2. $\frac{10}{12} + \frac{4}{6} = \frac{22}{10} = 2 \text{ and } \frac{1}{5}$
3. $\frac{3}{8} + \frac{3}{4} = \frac{9}{8} = 1 \text{ and } \frac{1}{8}$
4. $\frac{5}{8} + \frac{1}{4} = \frac{7}{8}$
5. $\frac{3}{5} + \frac{8}{15} = \frac{13}{15}$
6. $\frac{7}{9} + \frac{2}{3} = \frac{13}{9} = 1 \text{ and } \frac{4}{9}$
7. $\frac{6}{7} + \frac{8}{14} = \frac{20}{14} = 1 \text{ and } \frac{3}{7}$
8. $\frac{4}{6} + \frac{10}{18} = \frac{22}{18} = 1 \text{ and } \frac{2}{9}$

Challenge 2

Fill in the missing blanks to these addition questions making sure that you convert the denominators into the answer given. Simplify and convert the answer as well if possible. Remember to convert the final answer into a mixed number.

| | | | | |
|---|---|---|---|----|
| 2 | | 3 | | |
| 3 | + | 5 | = | 15 |

| | | | | |
|---|---|----|---|----|
| 3 | | | | 24 |
| 4 | + | 16 | = | 16 |

| | | | | |
|----|---|---|---|----|
| | | 1 | | 41 |
| 15 | + | 2 | = | 30 |

| | | | | |
|---|---|----|---|----|
| 4 | | 8 | | |
| 5 | + | 10 | = | 30 |

| | | | | |
|---|---|---|---|----|
| 3 | | 7 | | |
| 4 | + | 8 | = | 24 |

1 = 19

2 = 12

3 = 26

4 = 48

5 = 39

Challenge 3

Find and explain the mistakes in the questions below. Each one is simplified to its simplest form and converted to a mixed number.

Simplified

mixed number

| | | | | | | |
|---|---|----|---|----|----|-------|
| 4 | | 8 | | 80 | 40 | 1 and |
| 5 | + | 10 | = | 50 | 25 | 25/25 |

40/25 does not make the answer that we have. It should be 1 and 15/25. This

answer can also be simplified to 1 and 3/5

Simplified

mixed number

| | | | | | | |
|---|---|---|---|----|----|-------|
| 8 | | 5 | | 62 | 31 | 1 and |
| 9 | + | 6 | = | 36 | 18 | 1/18 |

31/18 does not convert to 1 and 1/18. It should be 1 and 13/18

Year 5
Week 10
Lesson 2- Adding fractions

Challenge 1

Add these numbers and fractions together.

1. $1 \text{ and } \frac{4}{5} + \frac{3}{10} = 2 \text{ and } \frac{1}{10}$
2. $1 \text{ and } \frac{1}{3} + \frac{5}{9} = 1 \text{ and } \frac{8}{9}$
3. $2 \text{ and } \frac{3}{4} + \frac{3}{8} = 3 \text{ and } \frac{1}{8}$
4. $1 \text{ and } \frac{1}{4} + \frac{7}{12} = 1 \text{ and } \frac{5}{6}$
5. $1 \text{ and } \frac{3}{6} + \frac{5}{12} = 1 \text{ and } \frac{11}{12}$
6. $2 \text{ and } \frac{2}{7} + \frac{9}{21} = 2 \text{ and } \frac{15}{21}$

Challenge 2

Add these two mixed numbers together.

- $1 \text{ and } \frac{3}{5} + 1 \text{ and } \frac{4}{10} = 3$
- $1 \text{ and } \frac{2}{3} + 2 \text{ and } \frac{5}{15} = 4$
- $2 \text{ and } \frac{3}{4} + 1 \text{ and } \frac{1}{8} = 3 \text{ and } \frac{7}{8}$
- $1 \text{ and } \frac{1}{4} + 1 \text{ and } \frac{7}{16} = 2 \text{ and } \frac{11}{16}$
- $1 \text{ and } \frac{3}{8} + 2 \text{ and } \frac{25}{80} = 3 \text{ and } \frac{11}{16}$
- $2 \text{ and } \frac{3}{7} + 1 \text{ and } \frac{7}{21} = 7$

Challenge 3

The sum of three fractions is $2\frac{1}{8}$

The rules for the what the three fractions could be are:

- The fractions have different denominators.
- All of the fractions are greater than or equal to a half.
- None of the fractions are improper fractions.
- All of the denominators are factors of 8
- What could the fractions be?

There are many answers to this as long as it follows the rules.

Challenge 1

Fill in the missing blanks to these subtraction questions making sure that you convert the denominators into the answer given. Simplify the answer as well if possible. **The last two are fairly tricky so take care.**

| | | | | |
|---|---|---|---|----|
| 2 | | 1 | | |
| 3 | - | 5 | = | 15 |

| | | | | |
|---|---|----|---|----|
| 3 | | 5 | | |
| 7 | - | 14 | = | 28 |

| | | | | |
|----|---|---|---|----|
| 9 | | 1 | | |
| 15 | - | 3 | = | 30 |

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|---|---|----|---|----|
| 4 | | 3 | | |
| 5 | - | 10 | = | 30 |

| | | | | |
|---|---|---|---|----|
| 3 | | 3 | | |
| 4 | - | 6 | = | 36 |

| | | | | |
|---|---|---|---|----|
| 5 | | | | 2 |
| 6 | - | 9 | = | 36 |

1 = 7 2 = 2 3 = 8 4 = 15 5 = 9 6 = 3

Challenge 2

Subtract these fractions, converting the mixed fraction to an improper fraction. Simplify if possible.

1. $1 \text{ and } \frac{1}{5} - \frac{2}{10} = 1$
2. $1 \text{ and } \frac{6}{8} - \frac{5}{16} = 1 \text{ and } \frac{7}{16}$
3. $1 \text{ and } \frac{1}{4} - \frac{7}{8} = \frac{3}{8}$
4. $1 \text{ and } \frac{4}{5} - \frac{7}{15} = 1 \text{ and } \frac{1}{5}$
5. $1 \text{ and } \frac{5}{6} - \frac{5}{18} = 1 \text{ and } \frac{5}{9}$
6. $2 \text{ and } \frac{5}{7} - \frac{8}{14} = 2 \text{ and } \frac{1}{7}$

Challenge 3

Subtract these fractions, converting the mixed fractions to an improper fraction. Simplify if possible.

1. $1 \text{ and } \frac{4}{5} - 1 \text{ and } \frac{4}{25} = 2 \text{ and } \frac{4}{25}$
2. $1 \text{ and } \frac{3}{5} - 1 \text{ and } \frac{1}{15} = \frac{3}{5}$
3. $2 \text{ and } \frac{3}{16} - 1 \text{ and } \frac{1}{8} = 1 \text{ and } \frac{1}{16}$
4. $1 \text{ and } \frac{2}{6} - 1 \text{ and } \frac{7}{12} = \frac{1}{4}$
5. $2 \text{ and } \frac{6}{8} - 1 \text{ and } \frac{15}{40} = 1 \text{ and } \frac{3}{8}$
6. $2 \text{ and } \frac{6}{7} - 2 \text{ and } \frac{7}{28} = \frac{17}{28}$

Year 5

Week 10

Lesson 4 - Multiplying fractions

Challenge 1

Work out the answer to each of these questions. If it is possible, convert to mixed number and simplify.

1. $3 \times \frac{1}{4} = \frac{3}{4}$

2. $\frac{3}{8} \times 3 = \frac{9}{8} = 1 \text{ and } \frac{1}{8}$

3. $4 \times \frac{2}{10} = \frac{8}{10} = \frac{4}{5}$

4. $\frac{2}{6} \times 5 = \frac{10}{6} = 1 \text{ and } \frac{4}{6} = 1 \text{ and } \frac{2}{3}$

5. $\frac{3}{7} \times 4 = \frac{12}{7} = 1 \text{ and } \frac{5}{7}$

6. $9 \times \frac{1}{2} = \frac{9}{2} = 4 \text{ and } \frac{1}{2}$

7. $7 \times \frac{2}{3} = \frac{14}{3} = 4 \text{ and } \frac{2}{3}$

8. $\frac{3}{5} \times 6 = \frac{18}{5} = 3 \text{ and } \frac{3}{5}$

Challenge 2

Work out the fractions below and use the symbols $<$ $>$ $=$ based on the answers you discover.

| | | |
|---------------------------|-----|--------------------------|
| $4 \times \frac{3}{10} =$ | $<$ | $3 \times \frac{3}{5} =$ |
| $3 \times \frac{3}{7} =$ | $>$ | $4 \times \frac{1}{7} =$ |
| $2 \times \frac{1}{2} =$ | $>$ | $2 \times \frac{1}{4} =$ |
| $3 \times \frac{1}{3} =$ | $=$ | $3 \times \frac{2}{6} =$ |
| $5 \times \frac{7}{10} =$ | $>$ | $3 \times \frac{4}{5} =$ |
| $6 \times \frac{5}{6} =$ | $<$ | $7 \times \frac{4}{5} =$ |

Challenge 3

Order the fractions below in ascending order based on your answer.

$4 \times \frac{5}{6}$ $3 \times \frac{10}{12}$ $3 \times \frac{2}{9}$ $5 \times \frac{12}{36}$ $5 \times \frac{4}{6}$
 $\frac{20}{6}$ $\frac{30}{12}$ $\frac{6}{9}$ $\frac{60}{36}$ $\frac{20}{6}$

$3 \times \frac{2}{9}$, $5 \times \frac{12}{36}$, $3 \times \frac{10}{12}$, $4 \times \frac{5}{6}$ and $5 \times \frac{4}{6}$