

Maths- Fractions

This lesson will be live on teams for
your class at;

9am-5L

10am-5H

11am-5M

Learning objective; To add mixed number fractions
with the same denominator.

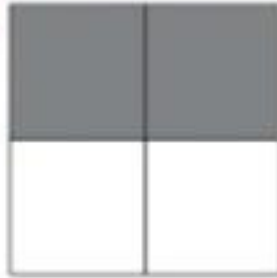
Warm up-

Write the fraction that is represented by the shaded region of each shape.

1.



2.



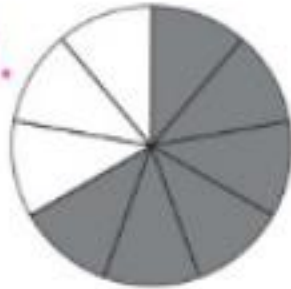
3.



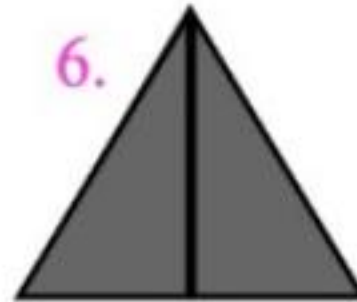
4.



5.



6.

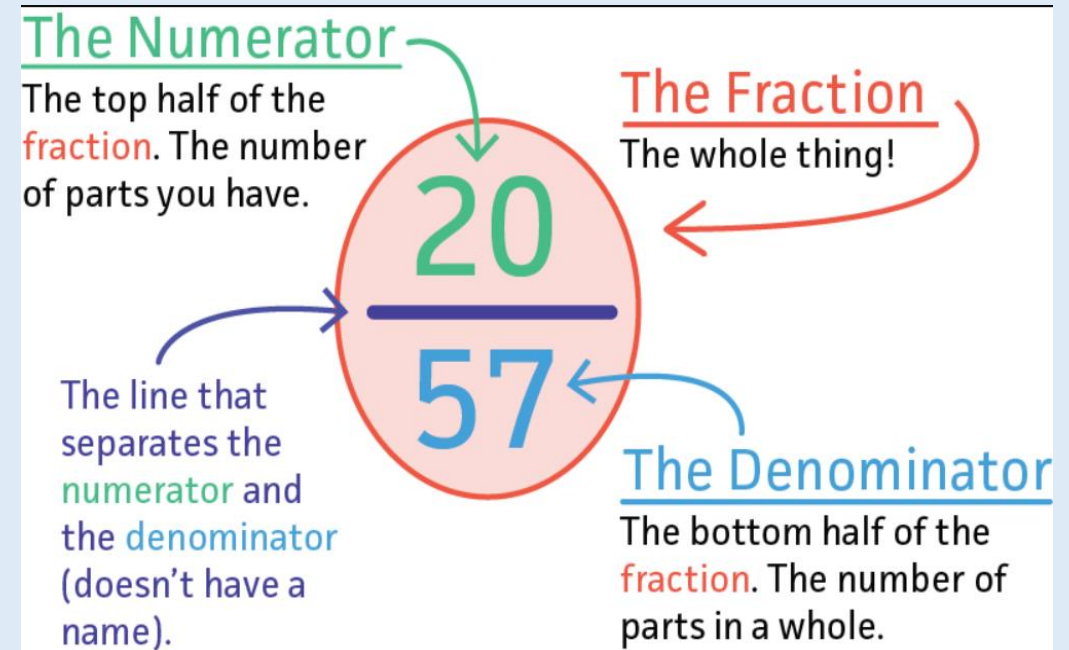


What is a fraction?

A fraction is defined as;

- Part of a **whole**.
- A figure or set of items which has been partitioned **equally**.

They have **numerators** and **denominators** to determine how the whole of something (all of it) is being split equally and how much of it is being represented (coloured/added/used).



Adding mixed number fractions with the same denominator.

Adding mixed number fractions can be easy when they both have the same denominator.

- First add the whole numbers together.
- Then add the fractions.
- If you have an improper you will need to convert it into a mixed number.
- Place your whole numbers and fraction together.

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

$$3+2=5$$

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

$$7 \div 5 = 1 \frac{2}{5}$$

$$5+1=6 + \frac{2}{5} = 6 \frac{2}{5}$$

Great example here that will only take 90 seconds to watch;
<https://www.youtube.com/watch?v=Rdvk-Vccmvs>

Fluency

1. $10\frac{2}{8} + 5\frac{4}{8} =$ _____

2. $9\frac{4}{10} + 8\frac{6}{10} =$ _____

3. $4\frac{1}{3} + 9\frac{1}{3} =$ _____

4. $10\frac{4}{6} + 5\frac{4}{6} =$ _____

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

6. $10\frac{3}{8} + 4\frac{2}{8} =$ _____

7. $10\frac{5}{9} + 8\frac{2}{9} =$ _____

8. $8\frac{3}{5} + 9\frac{4}{5} =$ _____

9. $7\frac{1}{2} + 3\frac{1}{2} =$ _____

10. $8\frac{6}{7} + 7\frac{3}{7} =$ _____

Answers

1. $10\frac{2}{8} + 5\frac{4}{8} = \underline{15\frac{3}{4}}$

2. $9\frac{4}{10} + 8\frac{6}{10} = \underline{18}$

3. $4\frac{1}{3} + 9\frac{1}{3} = \underline{13\frac{2}{3}}$

4. $10\frac{4}{6} + 5\frac{4}{6} = \underline{16\frac{1}{3}}$

5. $1\frac{1}{4} + 8\frac{2}{4} = \underline{9\frac{3}{4}}$

6. $10\frac{3}{8} + 4\frac{2}{8} = \underline{14\frac{5}{8}}$

7. $10\frac{5}{9} + 8\frac{2}{9} = \underline{18\frac{7}{9}}$

8. $8\frac{3}{5} + 9\frac{4}{5} = \underline{18\frac{2}{5}}$

9. $7\frac{1}{2} + 3\frac{1}{2} = \underline{11}$

10. $8\frac{6}{7} + 7\frac{3}{7} = \underline{16\frac{2}{7}}$

Another method

Sometimes you will find it easier to try a different method to add mixed number fractions.

This method looks at converting the fractions into improper fractions, then add them together, followed by then converting back to mixed number.

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

Step 1 Convert the two mixed number to improper fractions

$$2 \frac{4}{5} = 2 \times 5 = 10 + 4 = \underline{14/5} \quad 3 \times 5 = 15 + 3 = \underline{18/5}$$

Step 2 Add the improper fractions

$$\underline{14/5} + \underline{18/5} = 14 + 18 = \underline{32/5}$$

Step 3 Convert from improper to mixed number

$$\underline{32/5} = 32 \div 5 = \underline{6 \frac{2}{5}}$$

$$1. \quad 1 \frac{2}{7} + 1 \frac{1}{5} =$$

$$2. \quad 1 \frac{1}{10} + 2 \frac{2}{10} =$$

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

$$4. \quad 1 \frac{2}{9} + 1 \frac{6}{9} =$$

$$5. \quad 1 \frac{5}{12} + 2 \frac{1}{12} =$$

$$6. \quad 2 \frac{5}{6} + 2 \frac{2}{6} =$$

$$7. \quad 1 \frac{7}{11} + 1 \frac{5}{11} =$$

Answers

1. $1 \frac{2}{7} + 1 \frac{1}{5} =$

$$\frac{7}{5} + \frac{4}{5} = \frac{11}{5}$$

$$11 \div 5 = 2 \frac{1}{5}$$

2. $1 \frac{1}{10} + 2 \frac{2}{10} =$

$$\frac{11}{10} + \frac{22}{10} = \frac{33}{10}$$

$$33 \div 10 = 3 \frac{3}{10}$$

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

$$\frac{5}{4} + \frac{10}{4} = \frac{15}{4}$$

$$15 \div 4 = 3 \frac{3}{4}$$

4. $1 \frac{2}{9} + 1 \frac{6}{9} =$

$$\frac{11}{9} + \frac{15}{9} = \frac{26}{9}$$

$$26 \div 9 = 2 \frac{8}{9}$$

5. $1 \frac{5}{12} + 2 \frac{1}{12} =$

$$\frac{17}{12} + \frac{25}{12} = \frac{39}{12}$$

$$39 \div 12 = 3 \frac{3}{12}$$

6. $2 \frac{5}{6} + 2 \frac{2}{6} =$

$$\frac{17}{6} + \frac{14}{6} = \frac{31}{6}$$

$$31 \div 6 = 5 \frac{1}{6}$$

7. $1 \frac{7}{11} + 1 \frac{5}{11} =$

$$\frac{18}{11} + \frac{16}{11} = \frac{34}{11}$$

$$34 \div 11 = 3 \frac{1}{11}$$

Plenary- Word problem

Jack and Whitney have some juice.

Jack drinks $2\frac{4}{12}$ litres and Whitney drinks $2\frac{5}{12}$ litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?