

Lesson 22.05.20

LO: To add and subtract fractions

Success Criteria:

- | |
|-----------------------------------|
| 1. Look at your fractions |
| 2. Add or subtract the numerators |
| 3. Write your answer |

BBC Bitesize fractions: <https://www.bbc.co.uk/bitesize/topics/zhdwxnb/articles/z9n4k7h>

Model:

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

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

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

$\frac{3}{5} - \frac{2}{5} =$

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

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



3 ← **Numerator**
How many equal parts do you have?

4 ← **Denominator**
How many equal parts is the whole divided into?

Year 4 Maths Main activity

Complete at least 2 columns, more if you can!

Task 1 (Adding Fractions)

Practice: Write the equivalent fraction

1. $6/10 + 3/10$
2. $4/5 + 3/5$
3. $8/11 + 5/11$
4. $5/9 + 2/9$
5. $8/11 + 5/11$
6. $5/6 + 2/6$
7. $8/11 + 5/11$
8. $5/6 + 2/6$

Fill in the missing fractions

9. $3/7 + ?/? = 1$
10. $5/8 + ?/? = 7/8$

Read and answer the following problems

11. Joanne eats $3/8$ of a bunch of grapes; David eats $2/8$ of a bunch of grapes. What fraction of the grapes have they eaten altogether?
12. David has $4/7$ of a cream cake. Sarah has $1/7$ of the same cream cake. What fraction of the cake have they eaten altogether?

Challenge:

13. $3/10 + 2/5 = ?$
14. $3/6 + 4/12 = ?$
15. $3/4 + 7/8 = ?$

Task 2 (Subtracting Fractions)

Practice: Use the bar model to find the fraction of a quantity

1. $7/8 - 3/8$
2. $16/8 - 9/8$
3. $6/7 - 2/7$
4. $17/11 - 9/11$
5. $16/16 - 9/16$
6. $11/7 - 4/7$
7. $12/9 - 3/9$
8. $18/13 - 6/9$

Fill in the missing fractions

9. $13/8 - ?/8 = 7/8$
10. $13/5 - ?/5 = 6/5$

11.

$$2 - \frac{\square}{12} = 1 \frac{5}{12}$$

12.

$$3 - \frac{9}{12} = \frac{\square}{12}$$

13.

$$3 - \frac{\square}{16} = 2 \frac{11}{16}$$

14.

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

Task 3

Reasoning

Explain your answers.

1) The answer to a question is $\frac{4}{9}$; what is the question?

$$\frac{5}{12} + \frac{3}{12} = \frac{8}{12}$$

$$\frac{5}{12} + \frac{3}{12} = \frac{8}{24}$$

$$\frac{5}{12} + \frac{3}{12} = \frac{4}{6}$$

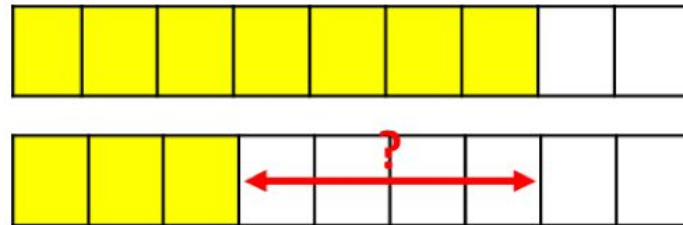
Explain your reasoning.

2.

Annie and Amir are working out the answer to this problem.

$$\frac{7}{9} - \frac{3}{9}$$

Annie uses this model.



Amir uses this model.



Which model is correct? Explain why.

Can you write a number story for each model?

3.

Mo and Teddy are solving:

$$\frac{6}{13} + \frac{5}{13} + \frac{7}{13}$$

Mo



The answer is $1 \text{ and } \frac{5}{13}$

Teddy

The answer is $\frac{18}{13}$



Who do you agree with?
Explain why.

Task 4

Problem solving

1. What could the value of each shape be?

$$\frac{\text{Hexagon}}{\text{Circle}} - \frac{\text{Triangle}}{\text{Square}} = \frac{\text{Triangle}}{\text{Circle}}$$

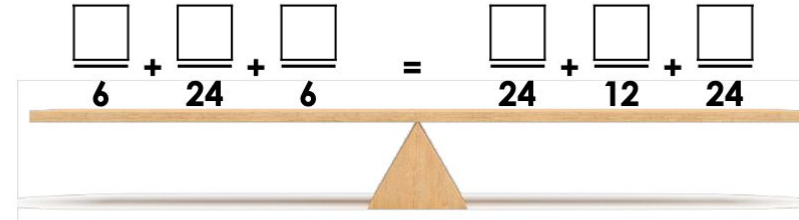
$$\text{Circle} = \square$$

$$\text{Square} = \square$$

$$\text{Triangle} = \square$$

$$\text{Hexagon} = \square$$

2. Daniel is trying to make the scales below balance by filling in the missing numerators.



Rules

1. Both calculations need to be equal to make the scale balance.
2. There are at least three improper fractions across the two calculations.
3. The answer is an improper fraction that is not a whole number.

Help Daniel to investigate the possible numerators to balance the scale.