

TUESDAY

A photograph of seven dark red wooden Scrabble tiles arranged in a diagonal line from the bottom-left to the top-right. Each tile is a square with a small notch on one side and a small bump on the opposite side. The tiles are inscribed with the letters of the word 'TUESDAY' in gold. Below each letter is a small gold number indicating its point value: T (1), U (1), E (1), S (1), D (2), A (1), and Y (4). The tiles are set against a plain, light-colored background, and soft shadows are cast to the right of each tile.

1. 544×86

2. How many vertices does a cube have?

3. $42 \div 7 \times 10 =$

4. $52 - 37 + 9^2$

5. $84\% \times 560$

6. Order smallest to largest: $\frac{1}{2}$ $\frac{2}{3}$ $\frac{3}{8}$ $\frac{3}{4}$ $\frac{8}{15}$

7. Write 301 m in km

8. Two square numbers have the product of 144, what are they?

9. Cheese costs £5.60 for 1kg. How much can you buy for £1.68?

1. $544 \times 86 = 46,784$

2. How many vertices does a cube have? **8 vertices**

3. $42 \div 7 \times 10 = 60$

4. $52 - 37 + 9^2 = 96$

5. $84\% \times 560 = 470.4$

6. Order smallest to largest: $\frac{3}{8}$ $\frac{1}{2}$ $\frac{8}{15}$ $\frac{2}{3}$ $\frac{3}{4}$

7. Write 301 m in km = **0.301 km**

8. Two square numbers have the product of 144, what are they? **36×4**

9. Cheese costs £5.60 for 1kg. How much can you buy for £1.68? **100g**

Lesson Objective:

To be able to add and subtract fractions with different denominators.

Success Criteria:

I can add and subtract fractions with different denominators.

Adding and Subtracting Fractions

Lesson 6

In Focus



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



$$\frac{5}{7} - \frac{1}{2} = \frac{4}{5}$$

Show that  and  are wrong.

My friend says he can show, using bar models or paper folding, that Lulu and Charles are incorrect.

What does he mean by this? Can we do this? What might it look like?

I believe that 1 third is actually a larger fraction than $2/7$. Can you prove this? Is this correct?

Is it possible to add a fraction larger than $2/7$ and get an answer of $2/7$?

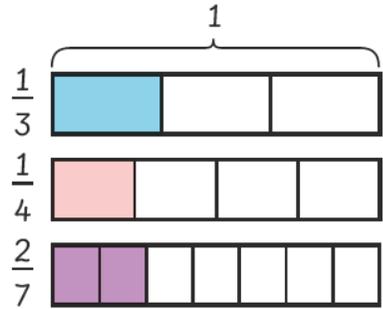
Which is bigger, $5/7$ or $4/5$? Can you draw them? What do they look like?

Is it possible to subtract fractions and get an answer that is larger than one of the original fractions? What must we do before we subtract fractions?

Let's Learn

1 Is $\frac{1}{3} + \frac{1}{4} = \frac{2}{7}$?

Method 1



By looking at the diagram, we can see that it is impossible that $\frac{1}{3} + \frac{1}{4} = \frac{2}{7}$.

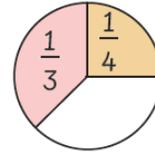
Method 2

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

$$\frac{1}{4} > \frac{1}{7}$$

So, $\frac{1}{3} + \frac{1}{4}$ must be greater than $\frac{2}{7}$.

Method 3



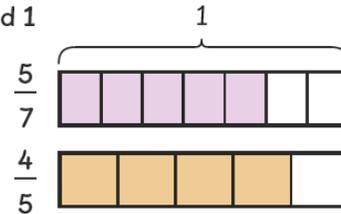
$\frac{1}{3} + \frac{1}{4}$ is greater than $\frac{1}{2}$ but $\frac{2}{7}$ is less than $\frac{1}{2}$.



$\frac{1}{3}$ and $\frac{1}{4}$ should have the same denominator before we add them.

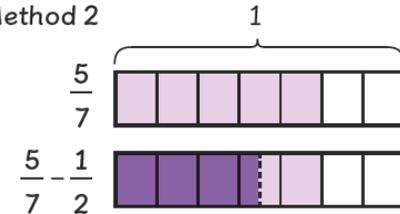
2 Is $\frac{5}{7} - \frac{1}{2} = \frac{4}{5}$?

Method 1



The diagram shows $\frac{4}{5} > \frac{5}{7}$.

Method 2



This is $\frac{5}{7} - \frac{1}{2}$ which is obviously less than $\frac{4}{5}$.



$\frac{4}{5}$ and $\frac{1}{2}$ must be written with the same denominator before subtracting.

Guided Practice

$$\frac{1}{2} \quad \frac{1}{3} \quad \frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{12} \quad \frac{2}{3} \quad \frac{5}{6} \quad \frac{5}{12} \quad \frac{7}{12} \quad \frac{11}{12}$$

- 1 Name two fractions that have a sum of 1.
- 2 Name two fractions that have a sum greater than 1.
- 3 Pick two fractions that have different denominators. Write each so that both have the same denominator.

Example: $\frac{1}{2}$ and $\frac{1}{3}$

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

Find the difference between the two fractions.

Guided Practice

Answers may vary

$$\frac{1}{2} \quad \frac{1}{3} \quad \frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{12} \quad \frac{2}{3} \quad \frac{5}{6} \quad \frac{5}{12} \quad \frac{7}{12} \quad \frac{11}{12}$$

- 1 Name two fractions that have a sum of 1. $\frac{2}{3}$ and $\frac{1}{3}$
- 2 Name two fractions that have a sum greater than 1. $\frac{11}{12}$ and $\frac{1}{4}$
- 3 Pick two fractions that have different denominators. Write each so that both have the same denominator.

Example: $\frac{1}{2}$ and $\frac{1}{3}$

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

Find the difference between the two fractions.

$$\frac{5}{6} - \frac{1}{12} = \frac{10}{12} - \frac{1}{12}$$

$$= \frac{9}{12}$$

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

Worksheet 6

Adding and Subtracting Fractions

1 Add and show your answer in the simplest form.

$$\begin{aligned} \text{(a)} \quad & \frac{2}{3} + \frac{1}{6} \\ & = \frac{\square}{6} + \frac{\square}{6} \\ & = \square \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & \frac{3}{8} + \frac{1}{4} \\ & = \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad & \frac{1}{12} + \frac{3}{4} \\ & = \end{aligned}$$

$$\begin{aligned} \text{(d)} \quad & \frac{3}{14} + \frac{2}{7} \\ & = \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad & \frac{1}{6} + \frac{1}{4} \\ & = \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad & \frac{1}{2} + \frac{2}{7} \\ & = \end{aligned}$$

Answers on next slides

Worksheet 6

Adding and Subtracting Fractions

1 Add and show your answer in the simplest form.

$$\begin{aligned} \text{(a)} \quad & \frac{2}{3} + \frac{1}{6} \\ & = \frac{\boxed{4}}{6} + \frac{\boxed{1}}{6} \\ & = \frac{\boxed{5}}{6} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & \frac{3}{8} + \frac{1}{4} \\ & = \frac{3}{8} + \frac{2}{8} \\ & = \frac{5}{8} \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad & \frac{1}{12} + \frac{3}{4} \\ & = \frac{1}{12} + \frac{9}{12} \\ & = \frac{10}{12} \\ & = \frac{5}{6} \end{aligned}$$

$$\begin{aligned} \text{(d)} \quad & \frac{3}{14} + \frac{2}{7} \\ & = \frac{3}{14} + \frac{4}{14} \\ & = \frac{7}{14} \\ & = \frac{1}{2} \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad & \frac{1}{6} + \frac{1}{4} \\ & = \frac{2}{12} + \frac{3}{12} \\ & = \frac{5}{12} \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad & \frac{1}{2} + \frac{2}{7} \\ & = \frac{7}{14} + \frac{4}{14} \\ & = \frac{11}{14} \end{aligned}$$

2 Subtract and show your answer in the simplest form.

$$\begin{aligned} \text{(a)} \quad & \frac{5}{6} - \frac{1}{3} \\ &= \frac{\boxed{5}}{6} - \frac{\boxed{2}}{6} \\ &= \frac{\boxed{3}}{6} \\ &= \frac{\boxed{1}}{2} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad & \frac{3}{4} - \frac{1}{8} \\ &= \frac{6}{8} - \frac{1}{8} \\ &= \frac{5}{8} \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad & \frac{7}{10} - \frac{3}{5} \\ &= \frac{7}{10} - \frac{6}{10} \\ &= \frac{1}{10} \end{aligned}$$

$$\begin{aligned} \text{(d)} \quad & \frac{7}{12} - \frac{1}{4} \\ &= \frac{7}{12} - \frac{3}{12} \\ &= \frac{4}{12} \\ &= \frac{1}{3} \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad & \frac{1}{2} - \frac{1}{5} \\ &= \frac{5}{10} - \frac{2}{10} \\ &= \frac{3}{10} \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad & \frac{3}{4} - \frac{1}{6} \\ &= \frac{9}{12} - \frac{2}{12} \\ &= \frac{7}{12} \end{aligned}$$

Remember that you also need to complete 60 minutes of Maths-Whizz for Friday, aiming to make at least 4 progressions. That can be just 12 minutes each day or in larger chunks, it's up to you.



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