

Year 4 Maths 21/1/21



RECALL- WHAT ARE THE FRACTIONS OF THESE AMOUNTS?

$\frac{1}{4}$ of 16

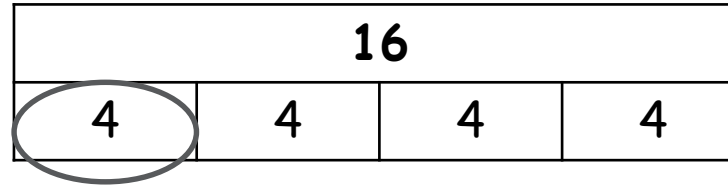
$\frac{1}{3}$ of 27

$\frac{3}{5}$ of 35

$\frac{2}{6}$ of 36

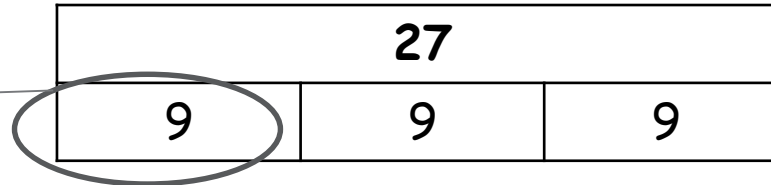
RECALL- WHAT ARE THE FRACTIONS OF THESE AMOUNTS?

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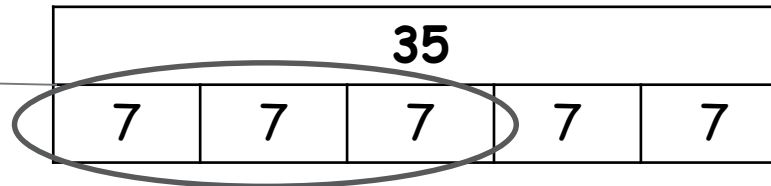
$\frac{1}{4}$ of 16 is 4

$\frac{1}{3}$ of 27



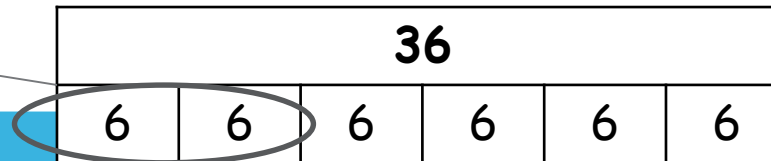
$\frac{1}{3}$ of 27 is 9

$\frac{3}{5}$ of 35



$\frac{3}{5}$ of 35 = $7 + 7 + 7 = 21$

$\frac{2}{6}$ of 36



$\frac{2}{6}$ of 36 = $6 \times 2 = 12$

L.O. I CAN ADD AND SUBTRACT
FRACTIONS WHERE THE
DENOMINATOR IS THE SAME
BEYOND A WHOLE.

Some will even- Use reasoning and problem solving skills to add fractions.

Some will- Give answers as mixed numbers.

Most will- Understand that you add the numerators.

All will-Show the fractions in a bar model.

GUIDED PRACTICE

Fractions can be added together just like any other numbers.
Let's start with something simple: adding together two quarters.

One monkey + one monkey = two monkeys

One banana + one banana = two bananas

One ice cream + one ice cream = two ice creams

One quarter + one quarter = two quarters

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

Notice how the denominator stays the same

Your turn:
What is one third add one third?

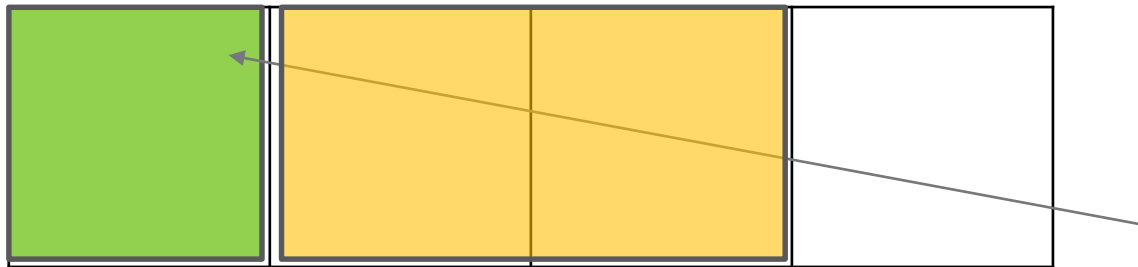
$$\frac{1}{3} + \frac{1}{3} =$$

Your turn:
What is one third add one third?

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

Using a bar model can be really useful when adding fractions.

$$\frac{1}{4} + \frac{2}{4} = ?$$



These are quarters, because the rectangle has been split into four equal parts.

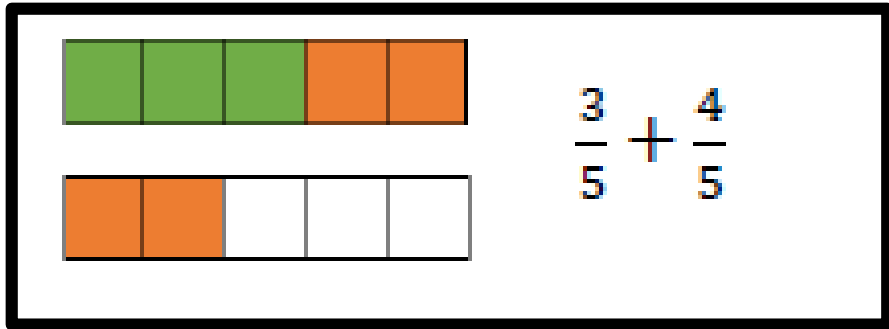
I'll colour in one quarter...

...then add two more quarters.

How many quarters are coloured altogether?

GUIDED PRACTICE

What happens if we add three fifths to four fifths?



I ran out of fifths to colour so I had to draw another rectangle split into fifths.

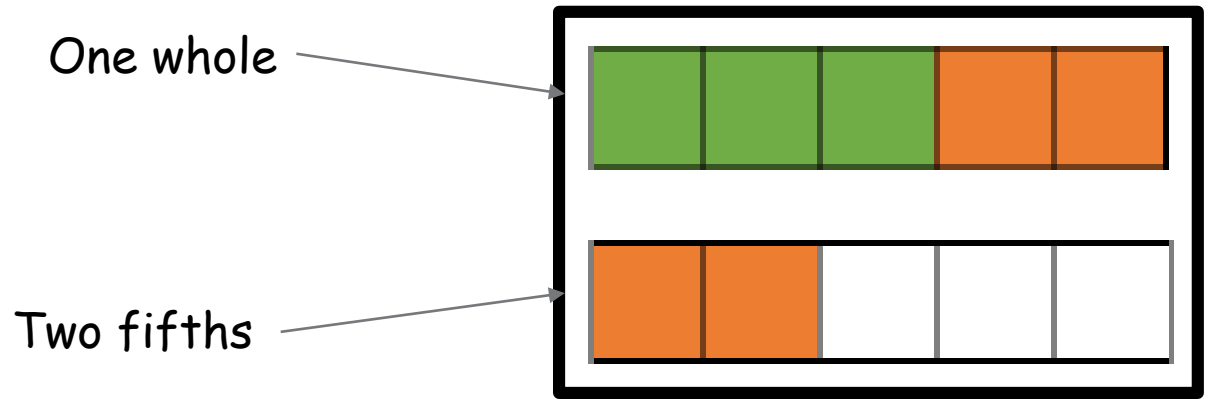
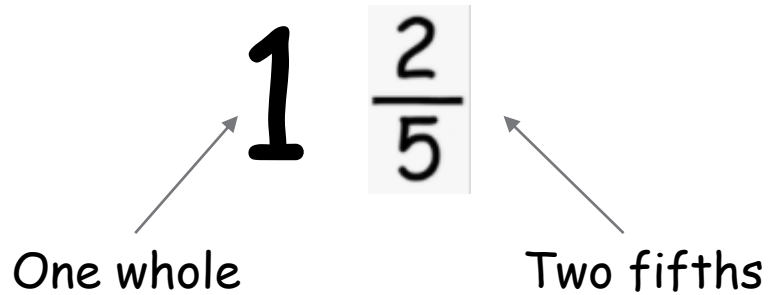
Our answer is seven fifths $\longrightarrow \frac{7}{5}$

I can see that seven fifths is more than one whole. Any fraction that is more than one whole is called an improper fraction.

Improper fractions are easy to spot. If the top number (the numerator) is bigger than the bottom number (the denominator), it's an improper fraction.

GUIDED PRACTICE

I can also see that when I add three fifths to four fifths, the answer is the same as one whole and two fifths.



So there are two ways of answering this question. Both are correct, because both are different ways of writing the same thing. They are equivalent.

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

This answer is an improper fraction

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

This answer is a mixed number - it is a mix of a whole number and a fraction

INTELLIGENT PRACTICE

Chilli 1

A: $\frac{1}{2} + \frac{1}{2} =$

B: $\frac{1}{4} + \frac{1}{4} =$

C: $\frac{1}{3} + \frac{1}{3} =$

D: One quarter add two quarters =

Chilli 2

A: $\frac{2}{5} + \frac{2}{5} =$

B: $\frac{3}{6} + \frac{1}{6} =$

C: $\frac{4}{8} + \frac{3}{8} =$

D: Three eighths + two eighths =

Chilli 3- Give answers as an improper fraction and mixed number.

A: $\frac{2}{4} + \frac{3}{4} =$

B: $\frac{3}{5} + \frac{3}{5} =$

C: $\frac{5}{6} + \frac{3}{6} =$

D: Seven eighths add 4 eighths =

INTELLIGENT PRACTICE ANSWERS

Chilli 1

A: $1/2 + 1/2 = 2/2$ (or 1 whole)

B: $1/4 + 1/4 = 2/4$

C: $1/3 + 1/3 = 2/3$

D: One quarter add two quarters =
Three quarters

Chilli 2

A: $2/5 + 2/5 = 4/5$

B: $3/6 + 1/6 = 4/6$

C: $4/8 + 3/8 = 7/8$

D: Three eighths + two eighths = Five eighths

Chilli 3- Give answers as an improper fraction and mixed number.

A: $2/4 + \frac{3}{4} = 5/4 = 1 \frac{1}{4}$

B: $3/5 + 3/5 = 6/5 = 1 \frac{1}{5}$

C: $5/6 + 3/6 = 8/6 = 1 \frac{2}{6}$

D: Seven eighths add 4 eighths = $11/8 = 1 \frac{3}{8}$

DIVE DEEPER

Dive Deeper 1

Use a bar model to represent each calculation.

$$\frac{1}{4} + ? = \frac{3}{4}$$

$$\frac{2}{3} + ? = 1 \text{ or } \frac{3}{3}$$

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

$$? + \frac{3}{8} = \frac{7}{8}$$

What do you notice about the numerator of each answer?

Dive Deeper 2

$$\frac{1}{?} + \frac{?}{4} = \frac{3}{4}$$

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

$$\frac{3}{6} + ? = \frac{8}{?}$$

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

Dive Deeper 3

Zoe thinks she has got the correct answer for this calculation.

$$\frac{3}{9} + \frac{2}{9} = \frac{5}{18}$$



Is she correct? Explain why.

How many different ways can you find to solve the calculation?

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{11}{9}$$

DIVE DEEPER ANSWERS

Dive Deeper 3

Dive Deeper 1

Use a bar model to represent each calculation.

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

$$2/3 + 1/3 = 1 \text{ or } 3/3$$

$$1/5 + 3/5 = 4/5$$

$$4/8 + 3/8 = 7/8$$

The numerator doesn't change.

Dive Deeper 2

$$1/4 + 2/4 = 3/4$$

$$1/5 + 3/5 = 4/5$$

$$3/6 + 5/6 = 8/6$$

$$5/8 + 7/8 = 12/8$$

Zoe thinks she has got the correct answer for this calculation.

$$\frac{3}{9} + \frac{2}{9} = \frac{5}{18}$$



Is she correct? Explain why.

How many different ways can you find to solve the calculation?

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{11}{9}$$

Zoe is incorrect. Zoe has added the denominator as well as the numerator.

Any combination of ninths where the numerators total 11.

Self assessment - how did you do?

Some will even-Use reasoning and problem solving skills to add fractions. *Dive deeper*

Some will- Give answers as mixed numbers. *3 chillis*

Most will- Understand that you add the numerators. *1 and 2 chillis*

All will-Show the fractions in a bar model. *Guided practice*