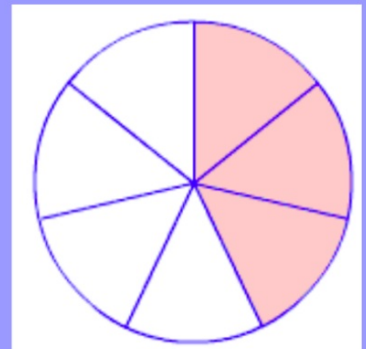
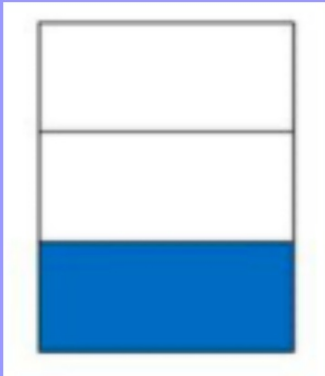
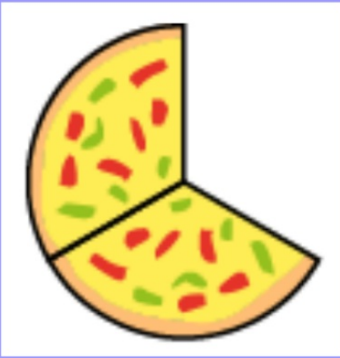
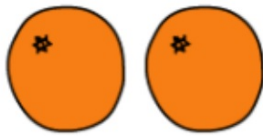


Monday

What fractions are shown below?



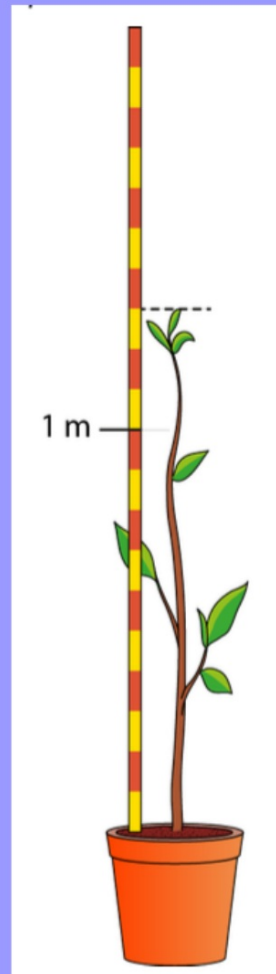
'How many oranges do Jonny and Ellen have altogether?'



How many oranges does Jonny have?

What fraction of orange does Ellen have?

How tall is the plant?

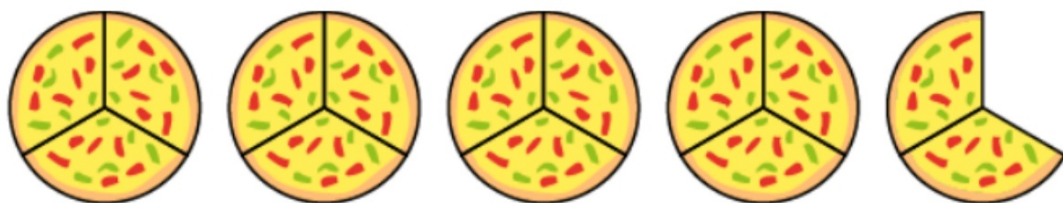


This is how long year 4 read for.

Day	Time spent reading
Monday	1 hour
Tuesday	1 hour
Wednesday	Quarter of an hour

How long did they read in total from Monday - Wednesday?

'How many pizzas are there?'



Let's use fractions to work out exactly how old you are!

The month right now is April.
There are 12 months in a year.

Firstly, how many months has it been since your birthday?

April
March
February
January
December
November
October
September
August
July
June
May

E.g.

Miss F is 26 years old
Her birthday is in October, w
6 months ago.
So, she is 26 years and 6 mo

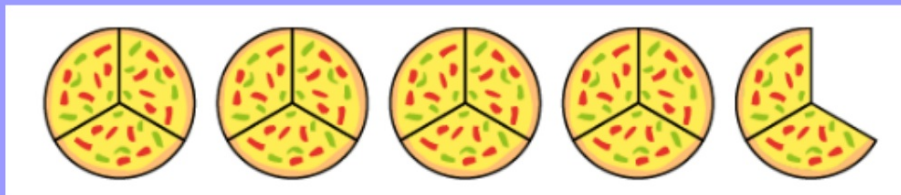
What could this be as a fra

April
March
February
January
December
November
October
September
August
July
June
May

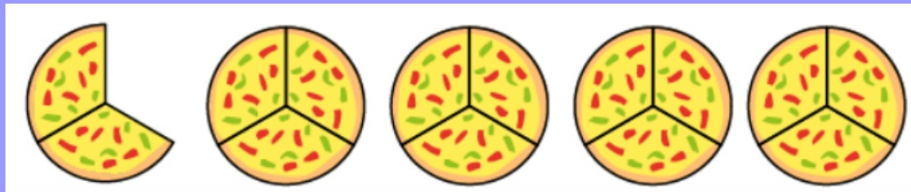
Now try to work out how old you are as a fraction.

How much pizza is shown here?

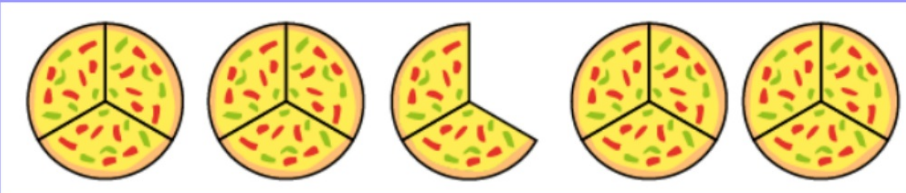
1)



2)



3)

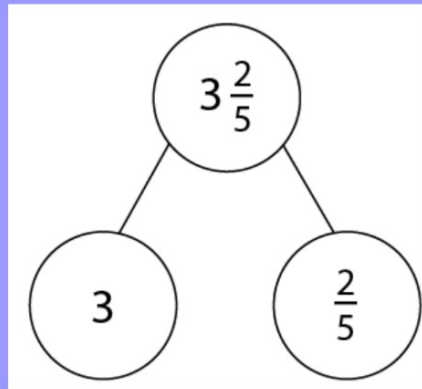


What is the same? What is different?

I am going to call out some mixed fractions.

You are going to write down the fraction on your whiteboard and I am going to pick somebody to read the fraction out loud.

From a part-part-whole model, there are 8 number sentences you can write down.



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

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

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

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

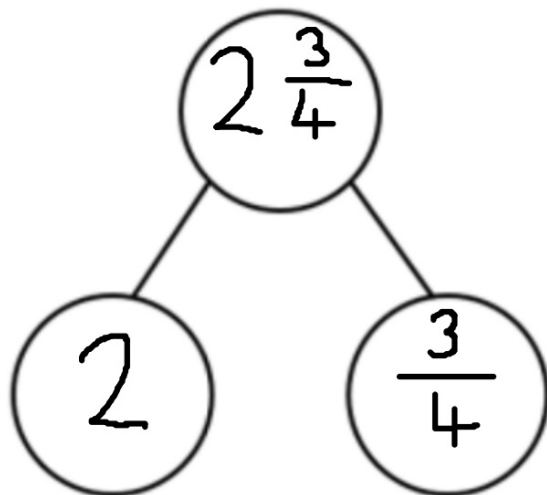
$$3 = 3 \frac{2}{5} - \frac{2}{5}$$

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

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

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

part
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ntences.



Your Turn

oks

uple
age)

write
number
g the
,

$$4 + \frac{2}{7} = \boxed{}$$

$$\frac{6}{9} + 5 \boxed{}$$

$$20 + \frac{8}{10} = \boxed{}$$

$$\frac{1}{15} + 7 \boxed{}$$

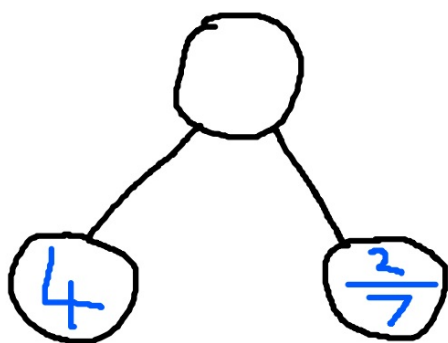
$$12 \frac{2}{7} - 12 = \boxed{}$$

$$5 \frac{1}{8} - \frac{1}{8} = \boxed{}$$

$$18 \frac{3}{20} - \boxed{} = 18$$

$$\boxed{} = 3 - \frac{1}{4}$$

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



art
e to

- 'Mia walks $\frac{3}{4}$ km to her friend's house and then another 1 km to school. How far does Mia walk in total?'
- 'Imran needs to drink $2\frac{1}{2}$ litres of water during a training session. He has $\frac{1}{2}$ litre in his water bottle. How much more water does Imran need?'
- 'Archie is making cakes for the school fair. His recipe needs 4 kg of white sugar and $\frac{2}{5}$ kg of brown sugar. How much sugar does Archie need in total?'
- 'I have $3\frac{7}{10}$ m of ribbon. I use 3 m of it. How much ribbon do I have left over?'

Tuesday

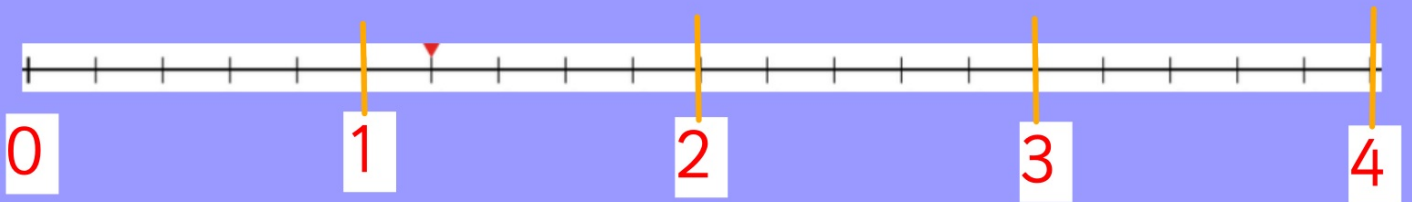
Starter

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

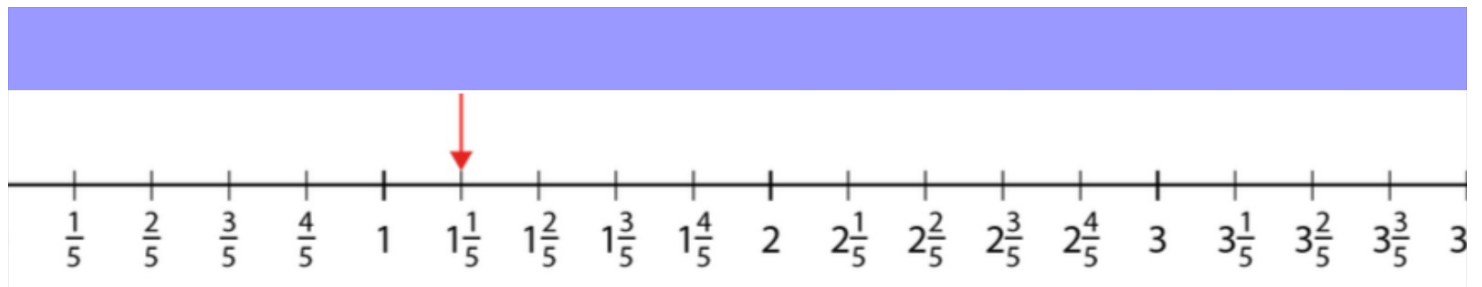
$$1 + \frac{4}{7} =$$

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

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

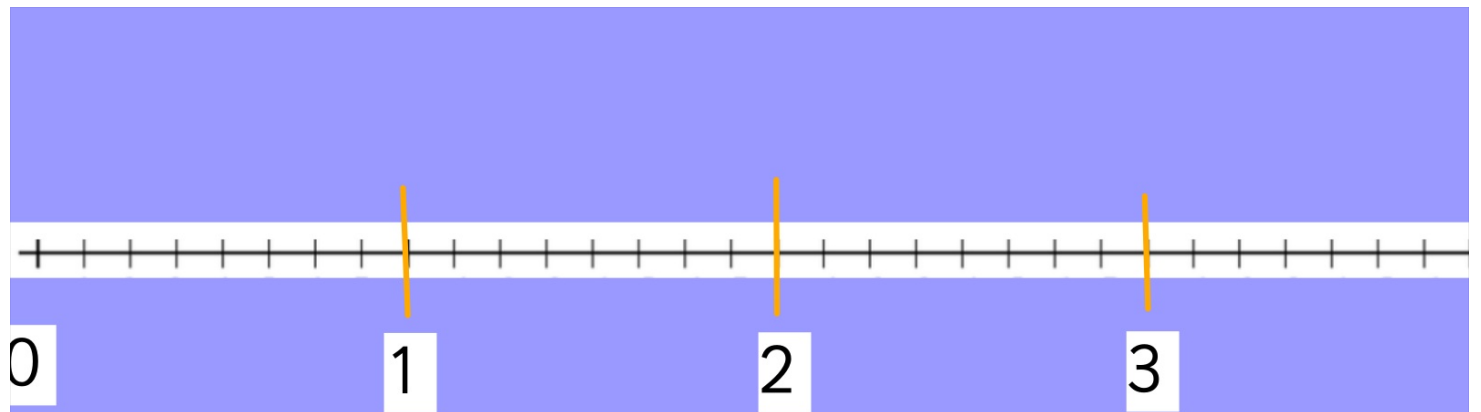


There are ____ parts between 0 and 1. This means we are counting in units of ____.

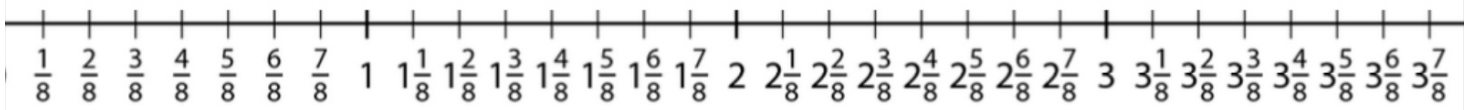


There are 5 parts between 0 and 1 so we are counting in units of $\frac{1}{5}$ s.

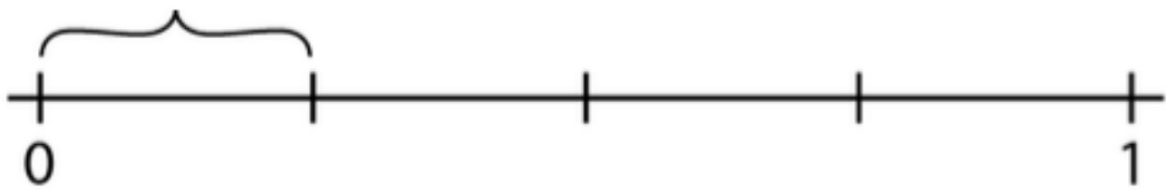
Let's practise counting up in fifths.



There are ____ parts between 0 and 1 so we are counting in _____.

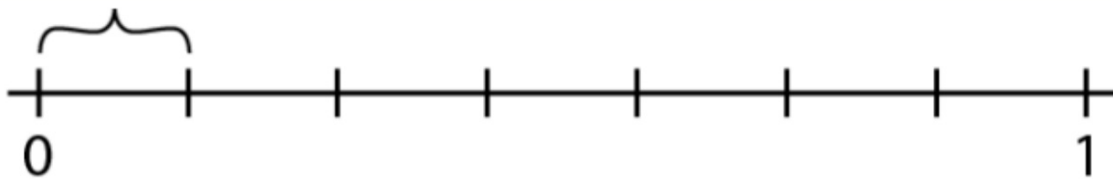


Let's practise counting up in eighths.



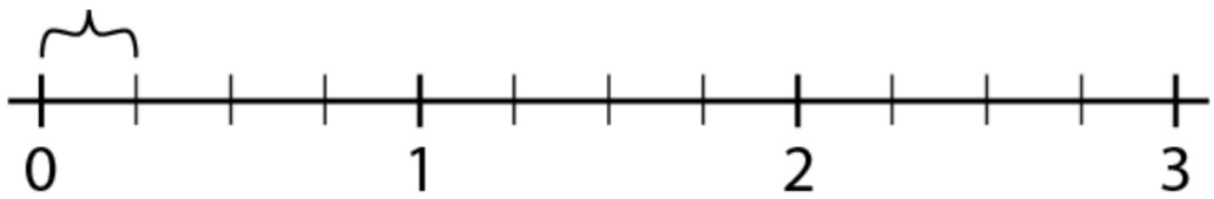
The line is divided in to _____ equal parts between 0 and 1. We are counting in _____.

Tell your partner.
What are the missing fractions?



The line is divided in to _____ equal parts between 0 and 1. We are counting in _____.

Tell your partner.
What are the missing fractions?

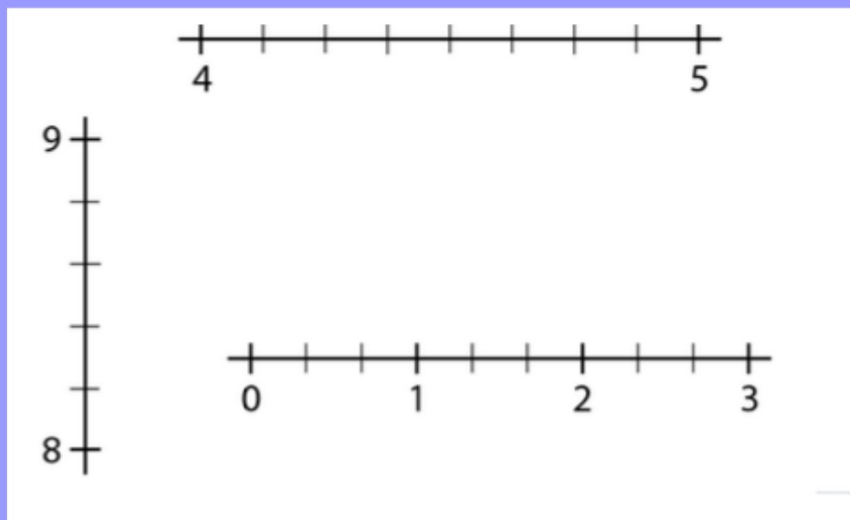


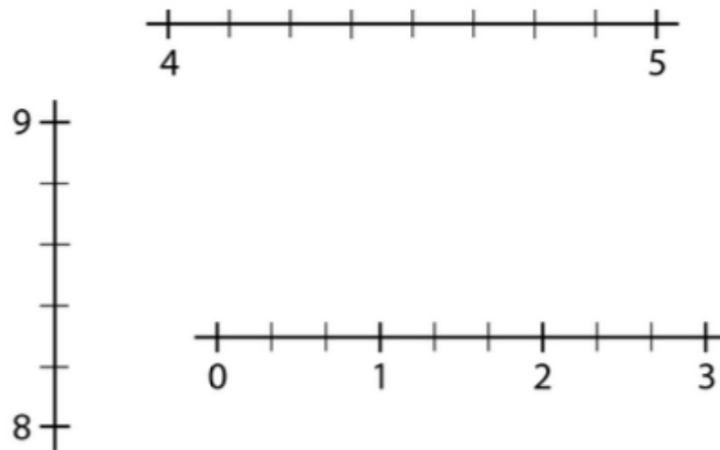
The line is divided in to _____ equal parts
between 0 and 1. We are counting in _____.

Tell your partner.
What are the missing fractions?

Number lines don't have to be horizontal.

Sometimes they might look different to try and trick you out!

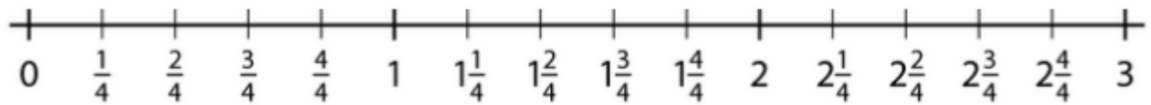




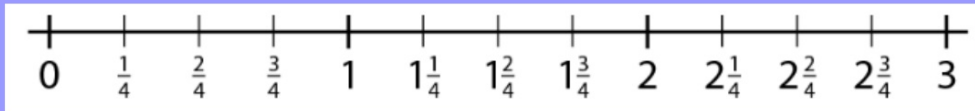
What
in betw
numbe

Dòng nǎo jīn:

'Sonny has labelled this number line incorrectly. Explain his mistake.'



The line is divided in to _____ equal parts **between each whole number**. We are counting in _____.



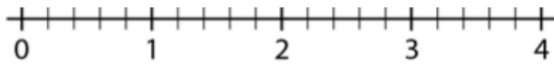
Tell me any number between 2 and 3.

Tell me a number very close to 3.

Tell me a number greater than 3 that is very close to 3.

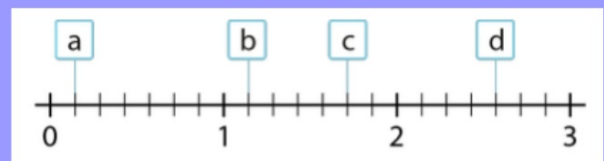
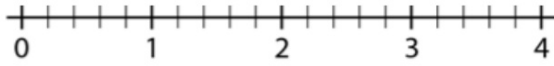
'Position these numbers on the number line:'

$$\frac{3}{5}, 1\frac{2}{5}, 2\frac{1}{5}, 2\frac{4}{5}$$



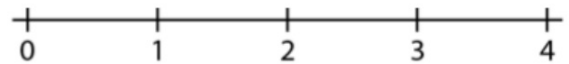
• *'Now try these:'*

$$\frac{4}{5}, 2\frac{3}{5}, 3\frac{1}{5}, 1\frac{4}{5}$$



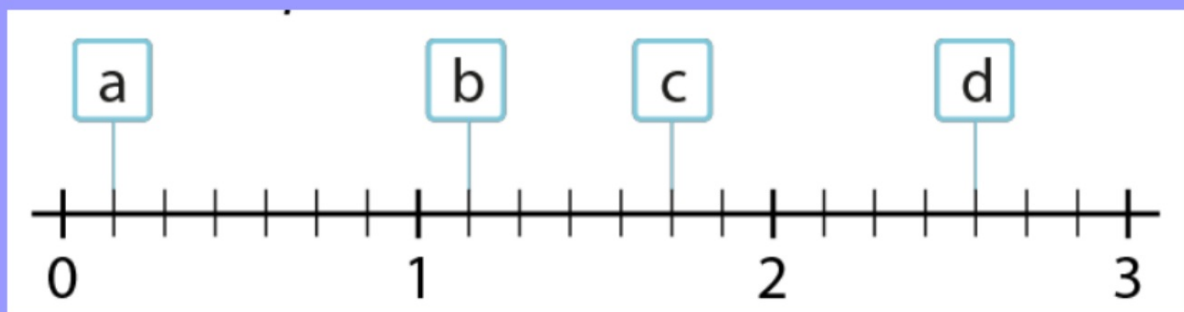
'Estimate the position of the following numbers on this number line.'

$$\frac{1}{2}, 1\frac{1}{3}, \frac{3}{4}, 3\frac{4}{5}$$

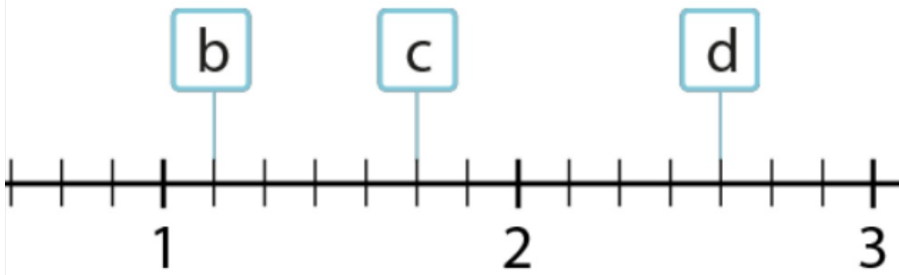


Wednesday

What fractions are in a, b, c and d?



There are _____ parts between 0 and 1 so we are counting in _____.



Can label our number
line and see which fractions
are larger/smaller.

$$\frac{1}{7} \quad \bigcirc \quad 1\frac{1}{7}$$

$$1\frac{1}{7} \quad \bigcirc \quad 1\frac{5}{7}$$

$$1\frac{7}{7} \quad \bigcirc \quad 2$$

$$2\frac{4}{7} \quad \bigcirc \quad 1\frac{5}{7}$$

$$1\frac{1}{7} \quad \bigcirc \quad 1\frac{5}{7} \quad \bigcirc$$

$$2\frac{4}{8}$$

$$3\frac{5}{6}$$

First, check the whole number. Which one is greater?

If they are the same, check the fraction. Which one is greater?

$$4 \frac{2}{6}$$

$$4 \frac{5}{6}$$

Check the whole number first - which is greater?

If they are the same, check the fraction - which is greater?

boards

$$1\frac{1}{2} \quad \bigcirc \quad 2$$

$$3 \quad \bigcirc \quad 3\frac{2}{3}$$

$$4 \quad \bigcirc \quad 3\frac{2}{3}$$

.S.

$$2\frac{3}{8} \bigcirc 1\frac{5}{7}$$

$$5\frac{99}{100} \bigcirc 8\frac{1}{100}$$

$$10\frac{2}{3} \bigcirc 9\frac{5}{6}$$

$$2\frac{2}{3} \bigcirc 3\frac{1}{3} \bigcirc 4\frac{1}{3}$$

'Put the numbers in order from smallest to largest.'

8

$4\frac{5}{7}$

7

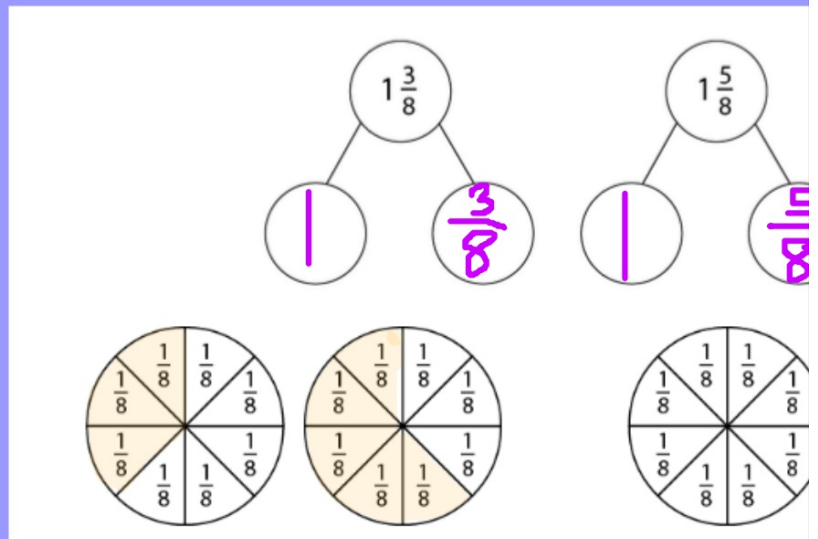
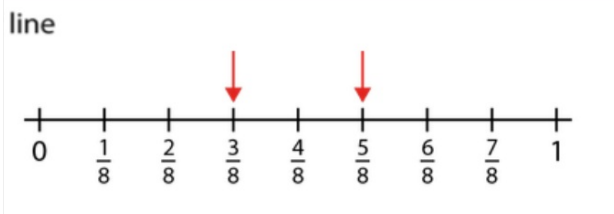
$5\frac{7}{8}$

5

$8\frac{4}{7}$

$$\frac{3}{8} < \frac{5}{8}$$

There are different ways that we can prove this.



For each of the questions, draw out 3 different methods to prove your answer.

1. $1\frac{3}{8}$ $2\frac{3}{8}$

2. $\frac{4}{6}$ $\frac{5}{6}$

3. $\frac{2}{3}$ $1\frac{2}{3}$

4. $3\frac{2}{8}$ $\frac{3}{8}$

Which fraction is bigger?

$$\frac{4}{6} \quad \text{or} \quad \frac{4}{5}$$

Use the materials on your table to work out the answer.

$$\frac{4}{6} < \frac{4}{5}$$

If the numerator is the same...

The greater the denominator, the smaller the fraction!

$$\frac{4}{5} \quad \bigcirc \quad \frac{4}{6}$$

$$1\frac{4}{5} \quad \bigcirc \quad 1\frac{4}{6}$$

$$2\frac{4}{5} \quad \bigcirc \quad 2\frac{4}{6}$$

$$3\frac{4}{5} \quad \bigcirc \quad 3\frac{4}{6}$$

$$100\frac{4}{5} \quad \bigcirc \quad 100\frac{4}{6}$$

Use the rule we have just learnt to answer these 5 questions in your book.

'Fill in the missing symbols (<, > or =).'

$$4\frac{3}{8} \bigcirc 3\frac{5}{8}$$

$$1\frac{11}{12} \bigcirc 1\frac{11}{15}$$

$$6\frac{4}{9} \bigcirc 6\frac{7}{9}$$

$$10\frac{99}{100} \bigcirc 11\frac{1}{100}$$

Ordering:

'Put these numbers in order from smallest to largest.'

$$3 \quad 3\frac{3}{5} \quad 3\frac{4}{5} \quad 3\frac{3}{8} \quad 5$$

Dòng nǎo jīn:

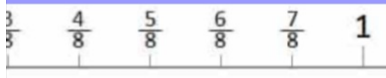
'Explain what numbers could be added to the expression below to make it true.'

$$2 < \square < 3$$

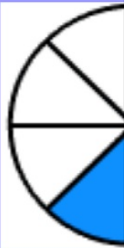
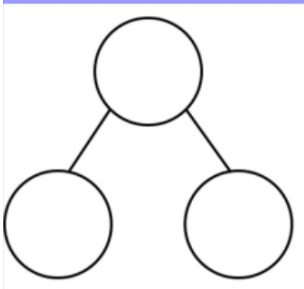
Thursday

Today we are going to be partitioning and combining fractions.

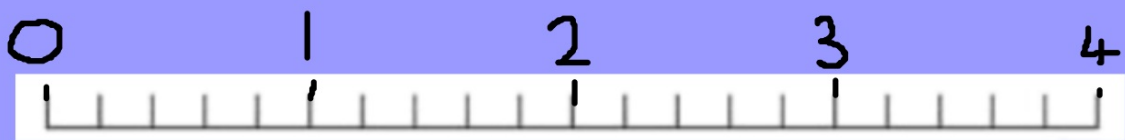
We are going to use 3 different models to show our answer.



- number lines
- area models
- part-part-whole models

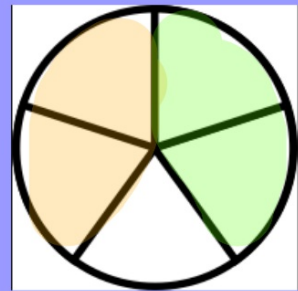
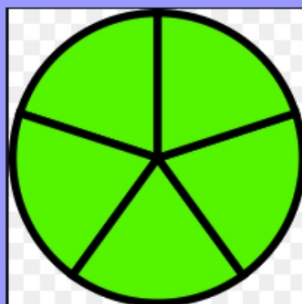
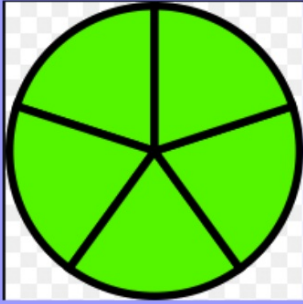


$$2\frac{1}{5} + \frac{2}{5} =$$



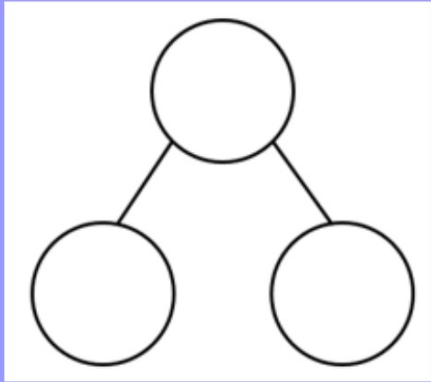
How can we show this calculation on a number line?

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

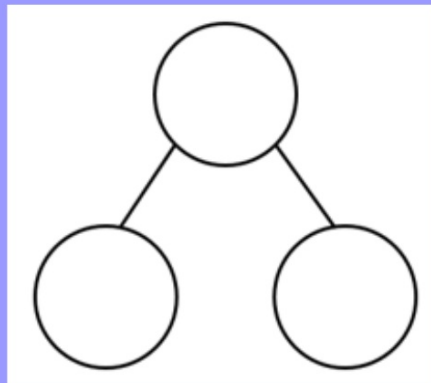


$$\frac{1}{5} + \frac{2}{5} =$$

Just like when we add whole numbers, adding fractions is commutative. This means we can be added in any order.



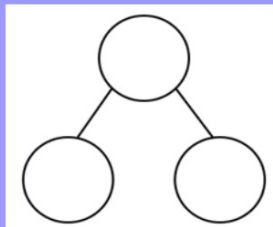
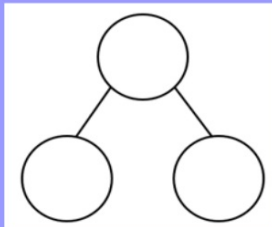
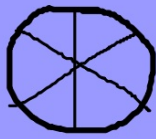
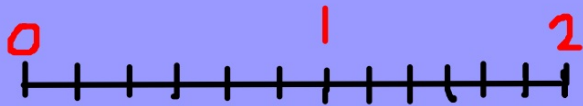
The parts are _____ and _____.



The whole is _____.

1.

$$1 \frac{3}{6} + \frac{2}{6}$$



The parts are ___ and ____.
The whole is _____.

2.

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

Even though addition is commutative (we can do it in any order), sometimes there is an order that is easier for us to work out.

Is it easier to work out:

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

or:

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

Why?

What about if we were adding...

$$1 \frac{4}{10} + 4 \frac{3}{10}$$

Now, we have whole numbers AND fractions to add so it is easier for us to partition (seperate) the numbers to make it...

$$1 + \frac{4}{10} + 4 + \frac{3}{10}$$

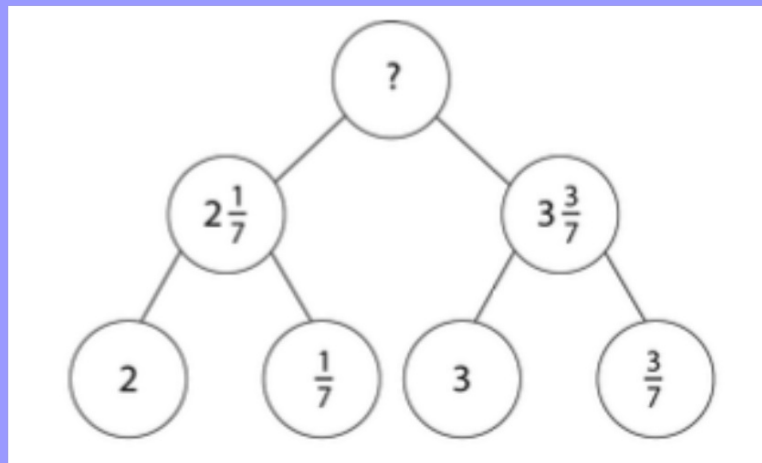
$$1 + 4 + \frac{4}{10} + \frac{3}{10}$$

$$= 5 + \frac{7}{10} = 5 \frac{7}{10}$$

$$2\frac{4}{8} + 3\frac{2}{8}$$

$$3\frac{3}{7} + 2\frac{3}{7}$$

We can also show our understanding using a part-part whole model.



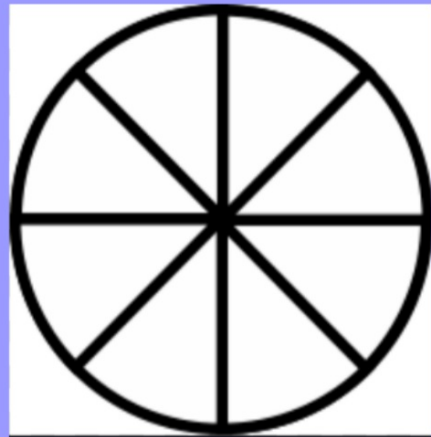
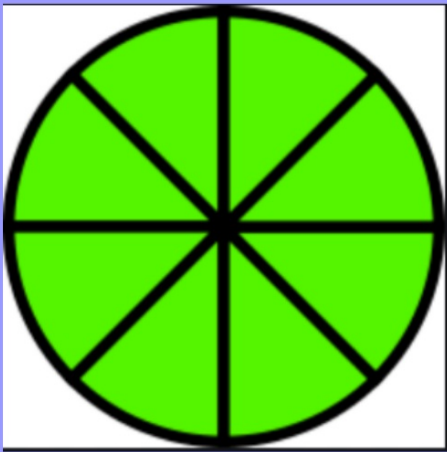
We need to add the whole numbers together.
We need to add the fractions together.
Then, combine.

We can use the same 3 models that we used earlier in the lesson to show subtraction.

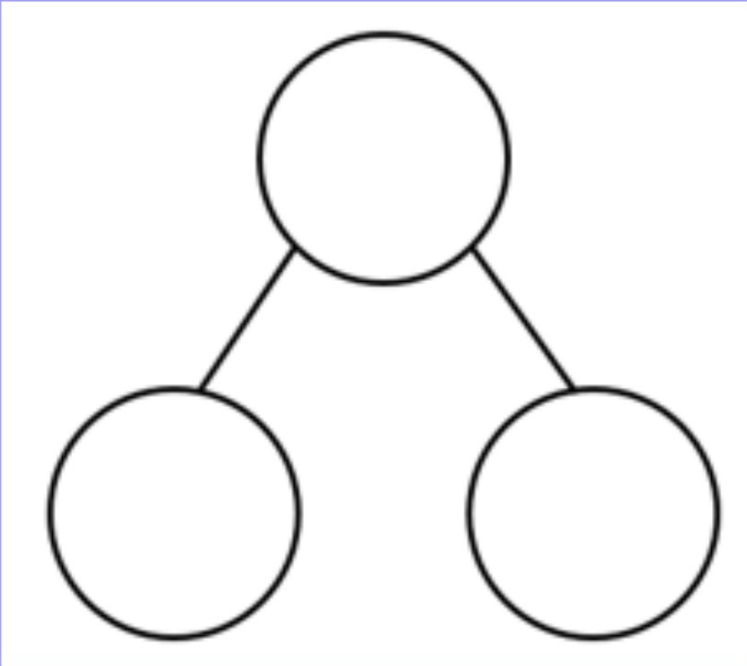
$$\left| \frac{7}{8} - \frac{2}{8} \right.$$



$$\frac{6}{8} - \frac{3}{8}$$



$$\left| \frac{6}{8} - \frac{3}{8} \right|$$



_____ is the whole.

_____ and _____ are the parts.

Answer the black questions, unless you are told to answer red or purple.

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

2. $\frac{3}{8} - \frac{1}{8} =$

3. $\frac{2}{9} - \frac{1}{9} =$

4. $\frac{1}{10} + \frac{4}{10} =$

5. $\frac{7}{11} + \frac{2}{11} =$

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

2. $1\frac{3}{8} - \frac{1}{8} =$

3. $3\frac{2}{9} - \frac{1}{9} =$

4. $2\frac{1}{10} + 3\frac{4}{10} =$

5. $3\frac{7}{11} + 6\frac{2}{11} =$

1. $3\frac{4}{6} + 4\frac{1}{6}$

2. $7\frac{3}{8} - 2$

3. $3\frac{2}{9} - 1$

4. $11\frac{1}{10} +$

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

Friday

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

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

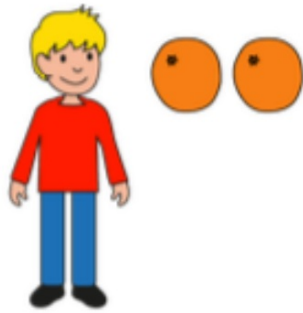
$$1\frac{2}{6} + \frac{3}{6} =$$

$$2\frac{7}{9} - \frac{1}{9} =$$

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

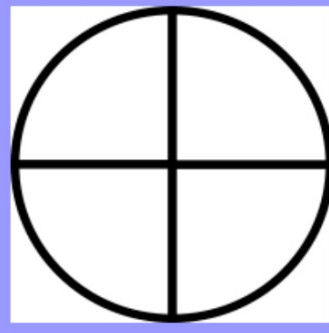
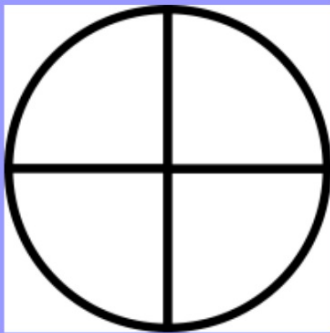
$$5\frac{6}{8} - 2\frac{4}{8} =$$

'How many oranges are there altogether?'

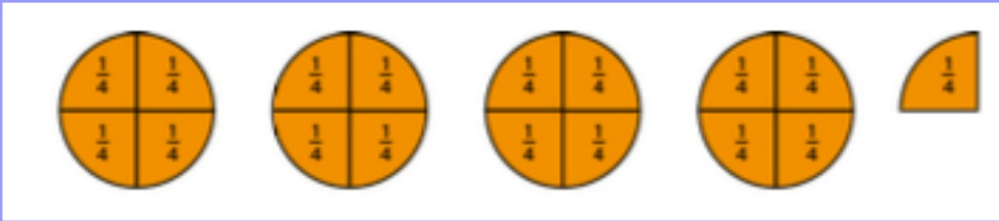




If I split my orange in to quarters. How many pieces will I have?



How many quarters do I have in total?



How many oranges do I have?

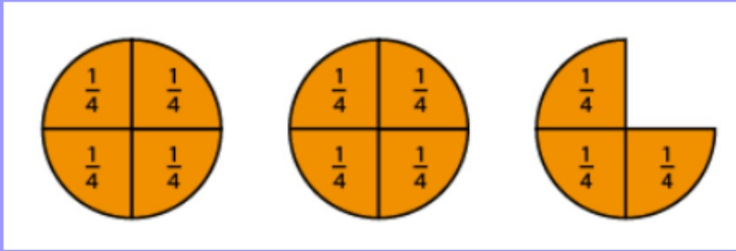
Mixed number

Improper fraction

Which is
s and
quarter,

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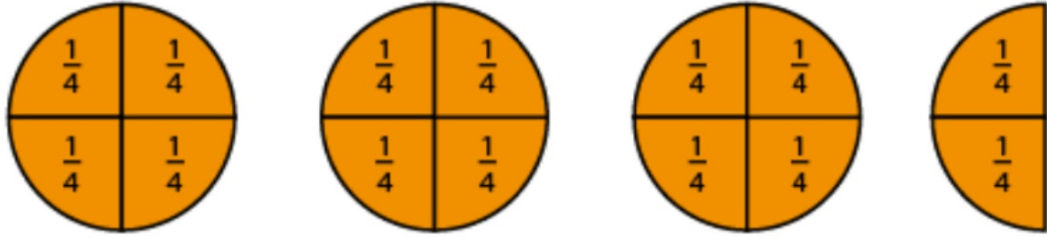
How many oranges do I have?

Mixed number

Improper fraction

—
—
Which is
s and
quarter,
—

=



How many oranges do I have?

Mixed number

Improper fraction

—
—
which is
s and
quarter,
—

=

Draw a bar model to show:

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

How many quarters do you have in total?
What is the number as an improper fraction?

There are ___ groups of 4-quarters, which is ___ quarters and ___ extra quarter, so that is ___ quarters.

Draw a bar model to show:

$$1 \frac{3}{4}$$

How many quarters do you have in total?

What is the number as an improper fraction?

There are _____
groups of 4-
quarters, which is

Improper fractions in to a mixed number

$$\frac{5}{4} =$$

How many quarters?

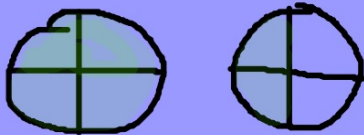
How many numbers?
How many quarters?

Journal

Draw bar models to answer these questions:

1.

$$\frac{6}{4} =$$



2.

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

3.

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

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beca

answer the same questions with different fractions.

Convert $1\frac{3}{5}$ to an improper fraction.

model for every question.

'Convert these mixed numbers to improper fractions.'

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

$$9\frac{1}{5}$$

$$6\frac{4}{5}$$

$$3\frac{1}{4}$$

$$7\frac{2}{4}$$

$$10\frac{3}{4}$$

'Convert these improper fractions to mixed numbers.'

$$\frac{8}{5}$$

$$\frac{24}{5}$$

$$\frac{31}{5}$$

$$\frac{6}{4}$$

$$\frac{15}{4}$$

$$\frac{29}{4}$$

er

'What is the same? What is different? Explain your thoughts as clearly as you can.'

$$\frac{17}{3} = \square \frac{\square}{\square}$$

$$17 \div 3 = \square \text{ remainder } \square$$





