Fractions

•Janine McIntosh: janine@amsi.org.au

•Michael O'Connor: moconnor@amsi.org.au

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
1	Fractions and Decimals	Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016)
2	Fractions and Decimals	Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)
3	Fractions and Decimals	Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole (ACMNA058)

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
4	Fractions and Decimals	Investigate equivalent fractions by exploring fractions used in contexts (ACMNA077)
4	Fractions and Decimals	Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078)
4	Fractions and Decimals	Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
5	Fractions and Decimals	Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)
5	Fractions and Decimals	Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)
5	Patterns and Algebra	Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107)
5	Chance	List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116)
5	Chance	Recognise that probabilities range from 0 to 1 (ACMSP117)

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
6	Fractions and Decimals	Compare fractions with related denominators and locate and represent them on a number line (ACMNA125)
6	Fractions and Decimals	Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126)
6	Fractions and Decimals	Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)
6	Patterns and Algebra	Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133)

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
7	Real Numbers	Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)
7	Real Numbers	Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)
7	Real Numbers	Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)
7	Real Numbers	Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)

Fractions

Content Descriptions

Year	Strand & SubStrand	Year Level
8	Number and Place Value	Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies(ACMNA183)
10	Patterns and Algebra	Apply the four operations to simple algebraic fractions with numerical denominators(ACMNA232)
10	Linear and non-linear relationships	Solve linear equations involving simple algebraic fractions (ACMNA240)

Fractions

Fraction language

Traditionally, the term ‘fraction’ was used to describe a part of a whole. (That is only true for fractions between zero and one.)

The word comes from the Latin *frango* – I break.

In our module, we take a fraction to mean an nonnegative rational number, that is, a number of the form $\frac{m}{n}$ where n is a positive integer and m is a positive integer or 0.

Fractions

Fraction language

For the fraction $\frac{5}{7}$,

the top number is called the ***numerator***,
the line is called the ***vinculum*** and
the bottom number is called the ***denominator***.

Fraction language

A mixed number consists of a whole number plus a fraction, for example $3\ \frac{1}{7}$.

Every improper fraction can be written as a mixed number and vice versa.

Fractions

Fraction language

We call a fraction a **proper fraction** if the numerator is less than the denominator.

For example, $\frac{3}{4}$ $\quad \frac{199}{203}$

If the numerator is greater than or equal to the denominator, the fraction is said to be an **improper fraction**.

For example, $\frac{4}{3}$ $\quad \frac{8}{8}$ $\quad \frac{199}{198}$

Fractions

What is 1

- It is the “basic” unit for numbers
- It is the standard measure
- It is the “separator” between whole numbers and fractions

- It is the multiplicative identity: $n \times 1 = n$

Anything multiplied by 1 gives the number you started with

Fractions

The importance of zero

- It is the “place keeper” symbol for our number system
- It is the Origin point from which all other numbers spread
- It is the “separator” between positive and negative numbers

- It is the additive identity: $n + 0 = n$

Zero added to any other number gives the number you started with

Fractions

0 and 1 together

Boundaries for all “Proper” fractions

i.e. between 0 and 1 are all the fractions

AND

Between 0 and 1 there are an infinite number of fractions

Fractions

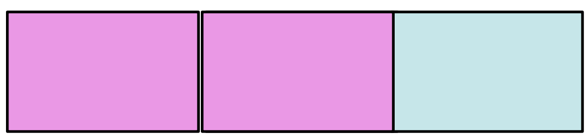
A number between

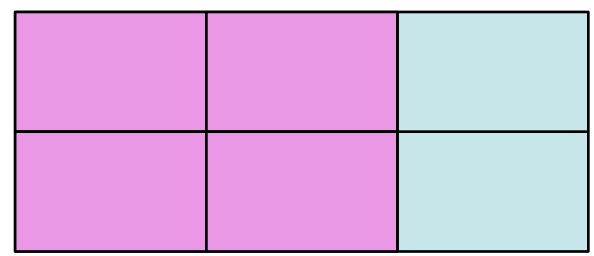
No matter how small you go, there will always be another fraction between the faction you have and 0.

Fractions

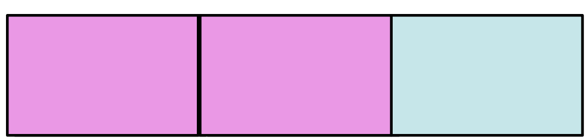
Fractions - some misconceptions

A child says $\frac{2}{3}+\frac{2}{3}=\frac{4}{6}$ and draws this picture





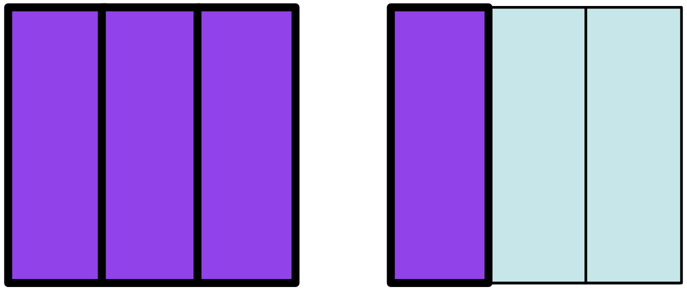
Add them together



Fractions

Fractions - some misconceptions

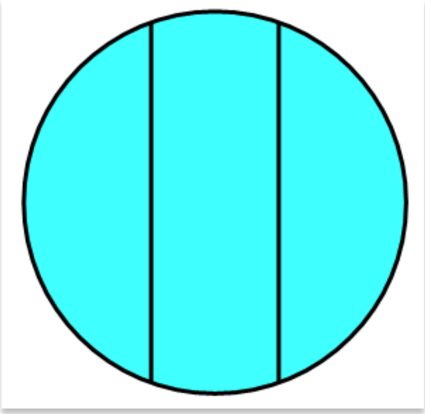
What fraction does this picture represent?



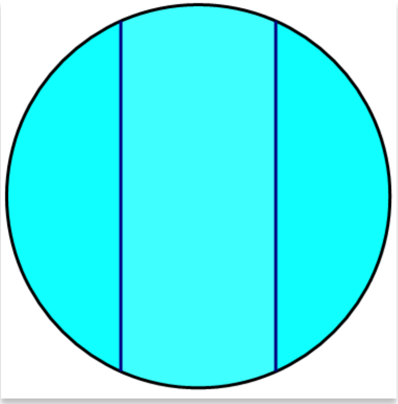
Fractions

Fractions - some misconceptions

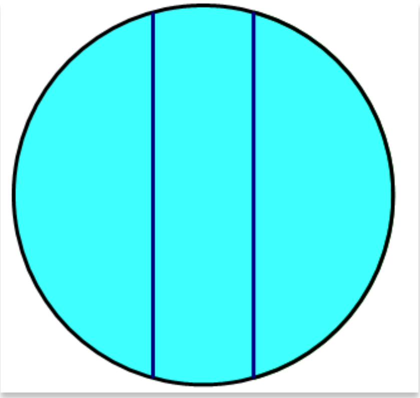
Which circle is divided into thirds by area?



Equal Widths



Centre is Half of the circle



Each is $\frac{1}{3}$ total area

Fractions

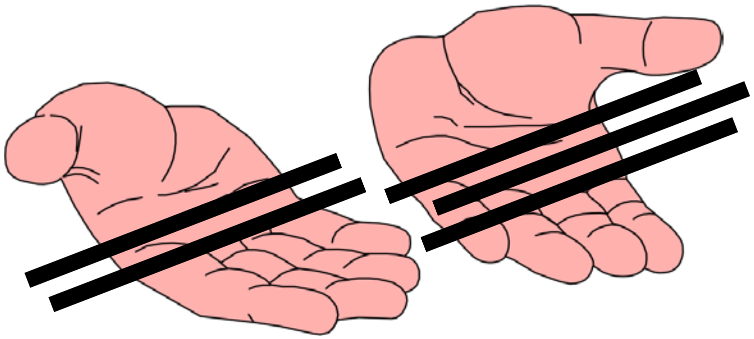
Fractions - some misconceptions

Sometimes you can have a bigger half.

Fractions

Fractions - early strategies

Stick in hands

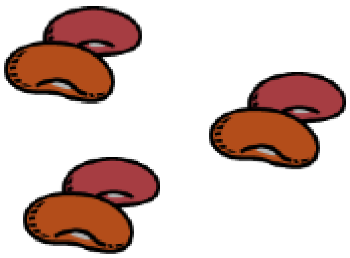


Small children should be exposed to puzzles and to cutting things up to develop a sense of ‘part/whole’ relationships

Fractions

Fractions - early strategies

Magic beans
(Lima beans sprayed gold on one side)



- Take a handful.
- Throw them.
- Talk about the number of gold out of the total number of beans.
- Link to ‘numerator’ and ‘denominator’.

Fractions

Representing fractions

There are two main ways to represent fractions.

- The number line

The number line is better to use for addition, subtraction and order.

- Area diagrams

The area model is better to use for multiplication.

Fractions

Fractions - the number line

Introducing the number line

- Mark in zero and one other reference point
- Convention of negative numbers to the left, zero in the middle and positive numbers to the right
- Move towards children drawing their own

Fractions

Fractions - the number line

Use

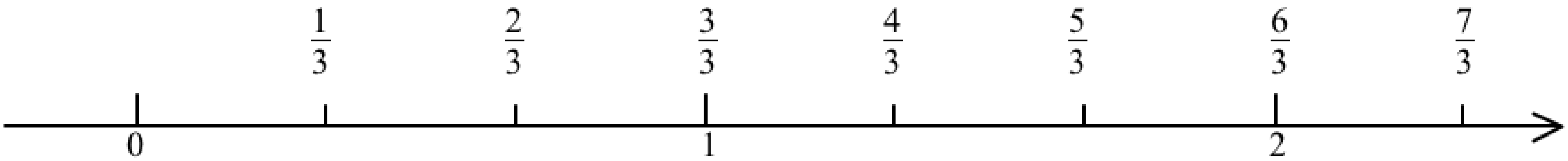
- Masking tape on the floor
- String across the room
- Chalk in the playground
- Magnetized numbers on a blackboard or whiteboard
- Cash-register rolls
- Number ladder

Fractions - the number line

- Step through the introduction of the number line very slowly
- Do not assume this has been done before
- Remind the children all the time, where is the one?

Fractions

Fractions - the number line



To represent thirds on a number line

- Draw a line segment
- Mark in whole numbers   0, 1, 2 etc
- Divide the segment into three equal lengths
- Label each marker one third, two thirds etc

Fractions

Watch for confusion...

- Defining fractions on number line

- A fraction is both
  - A point **on** the number line

    AND
  - The distance from 0, a length

Fractions

Fractions - folding paper

Folding paper helps develop the vocabulary needed

Connects to the number line

Start by folding paper strips.

Streamers are cheap and easy to use.

Begin with

halving quartering eighthing

Then move on to

thirding sixthing twelfthing

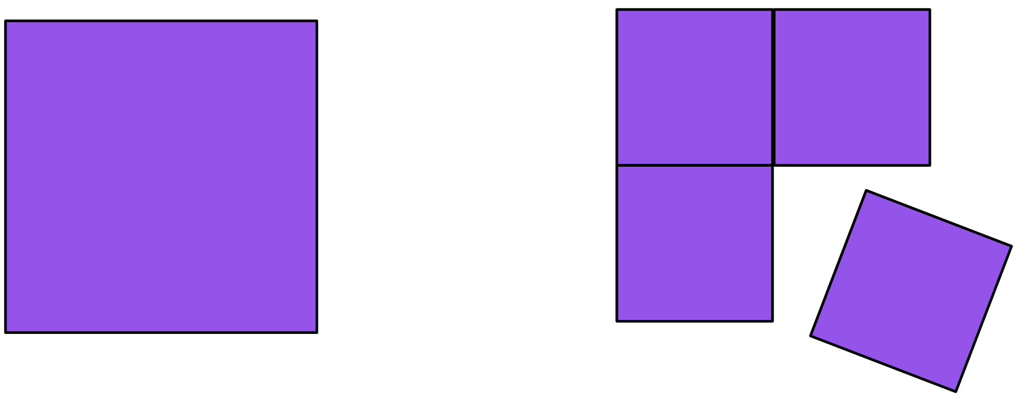
fifthing tenthing

Fractions

Folding paper

Make posters using kindergarten squares

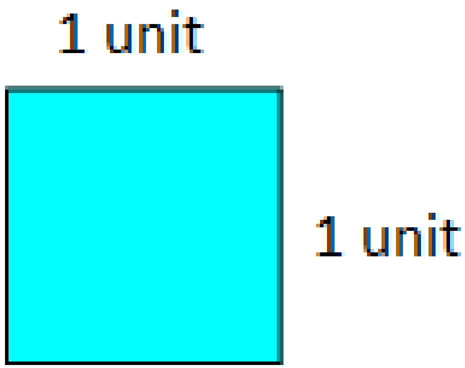
- Show understanding of cutting the whole
- Begin to introduce the idea of equivalence



Fractions

Area model

The unit square is a square with each side of length 1 unit.

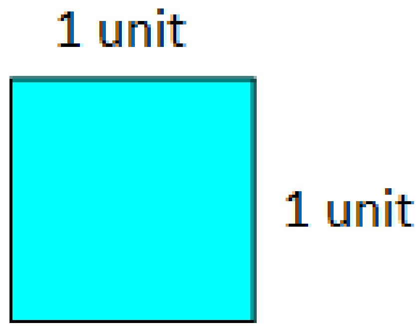


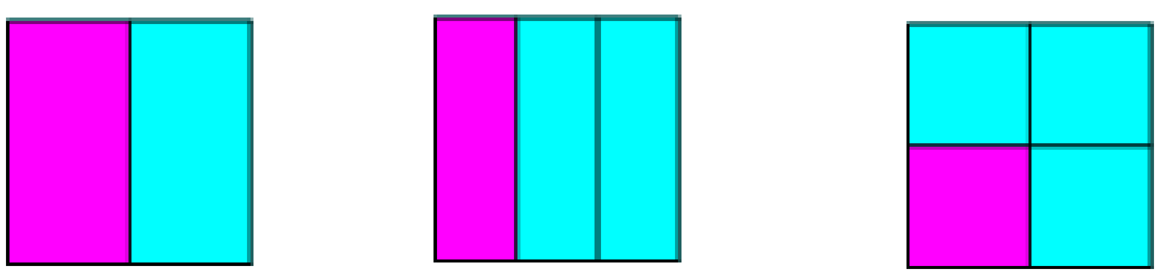
Side length = 1
Area = 1

Fractions

Area model

Remind the children all the time, what is the one?





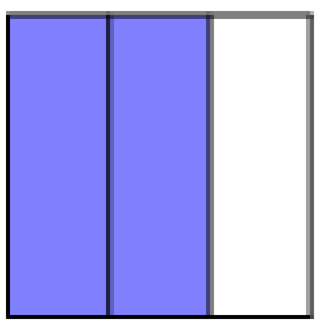
Fractions

Area model

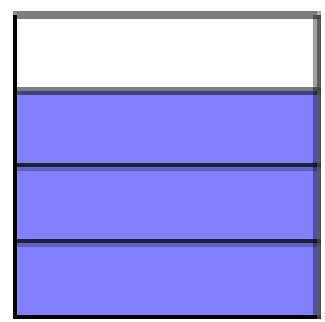
Shade parts of the unit square

- Denominator gives number of parts
- Numerator tells us “How many parts to take”

$\frac{2}{3}$



$\frac{3}{4}$



Fractions

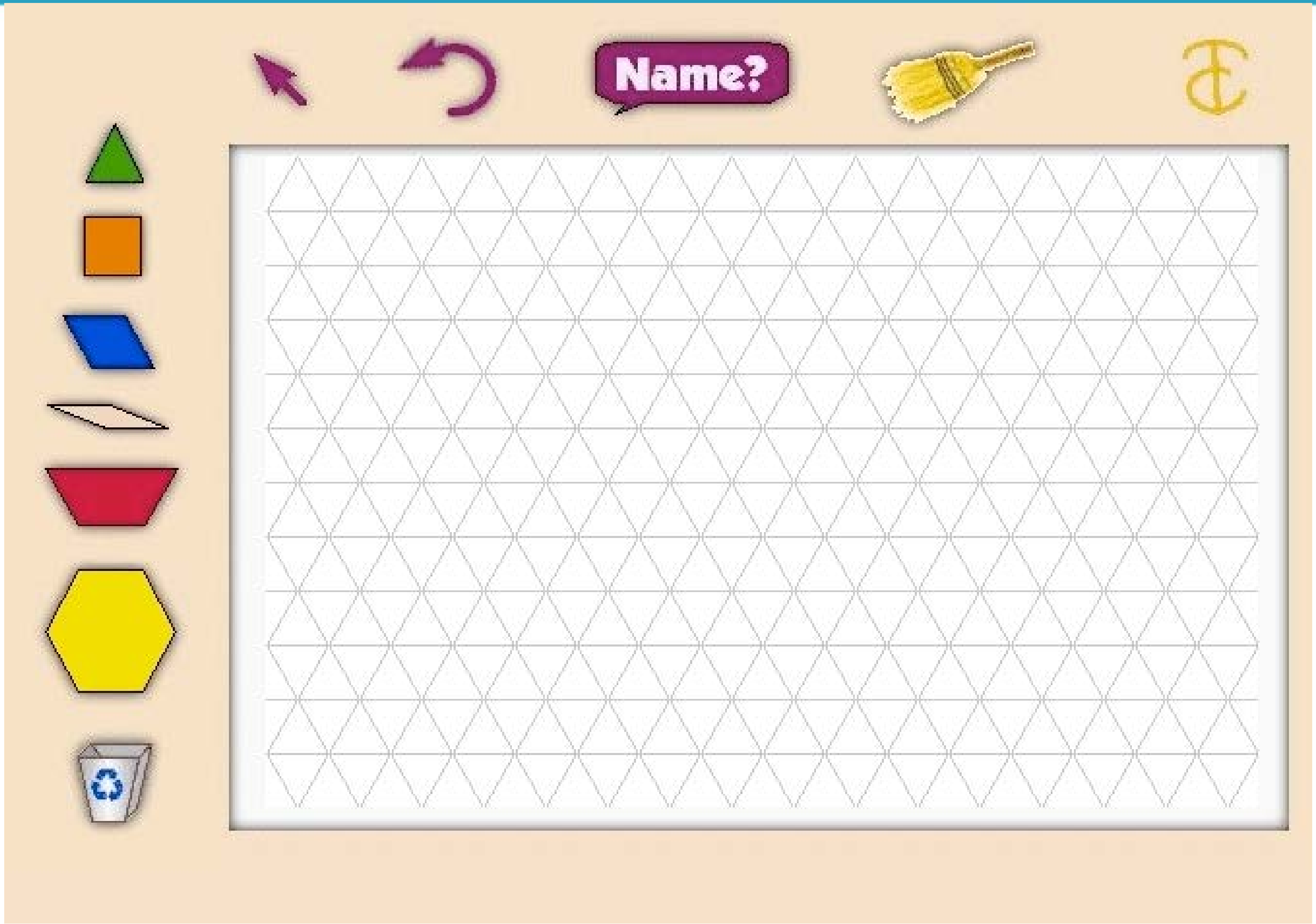
Using pattern blocks (area model)

A different way of using manipulatives

- Pattern blocks can be used to represent fractions
- The issue here is to make sure we always know what the one is
- Use after unit square and number line are firmly understood
- There is a nice java applet on the web
- http://www.arcytech.org/java/patterns/patterns_j.shtml

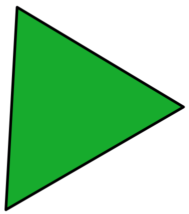
Fractions

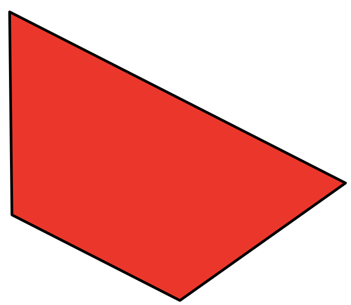
Using pattern blocks

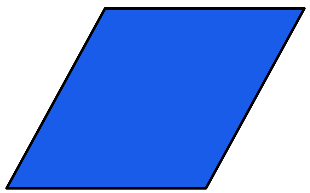


Fractions

Using pattern blocks

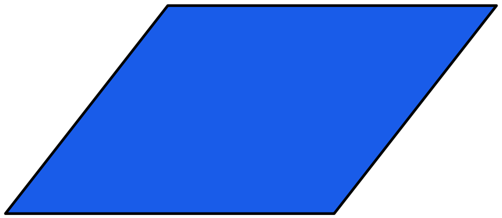
If  is 1,

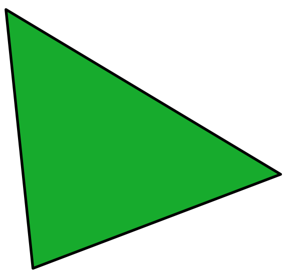
then  is 3

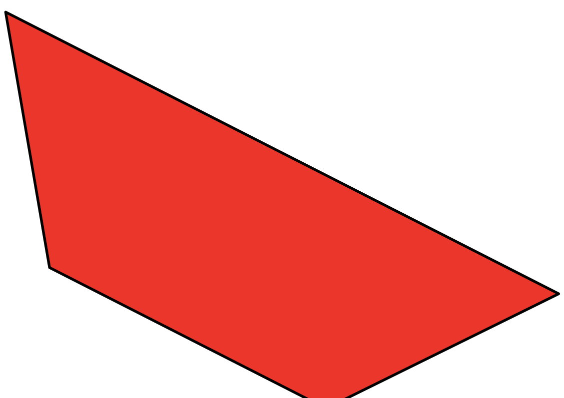
and  is 2.

Fractions

Using pattern blocks

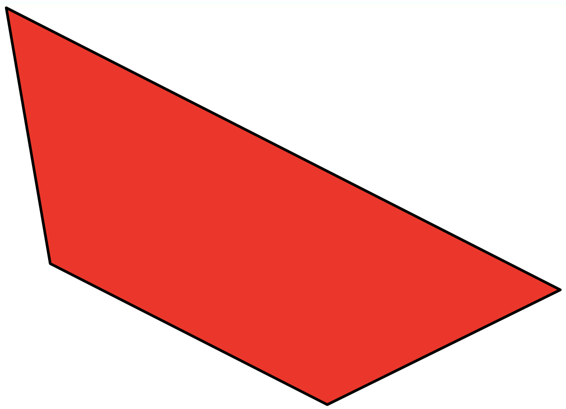
If  is 1,

then  is $\frac{1}{2}$

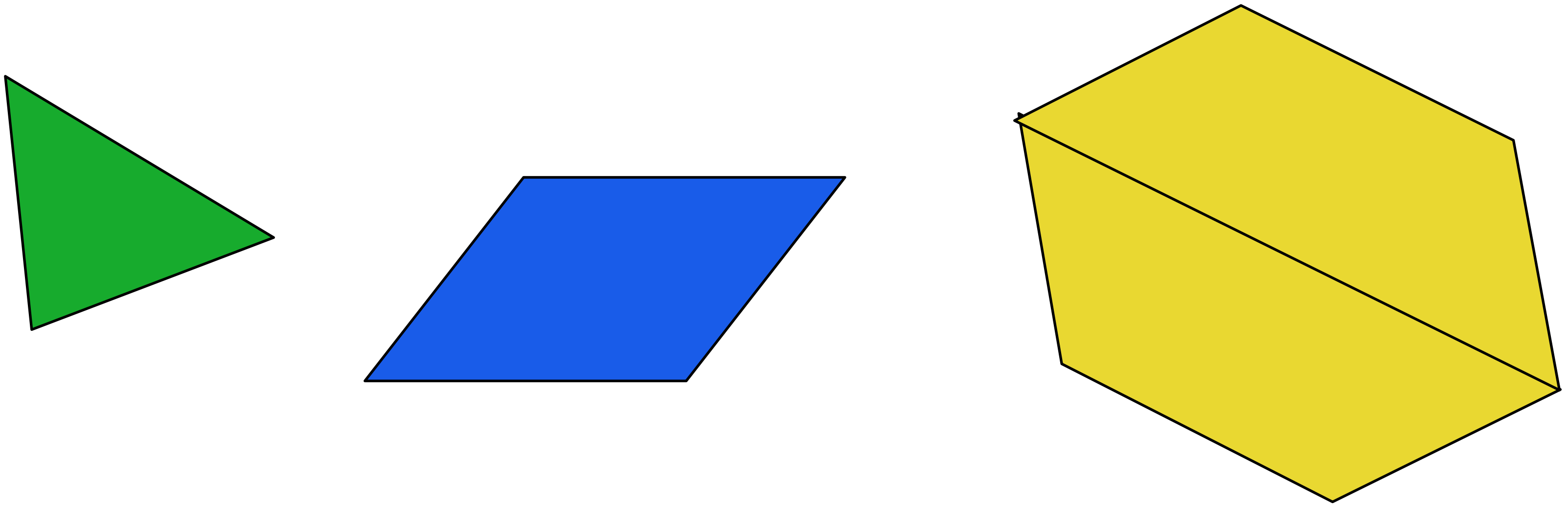
and  is $1\frac{1}{2}$.

Fractions

Using pattern blocks

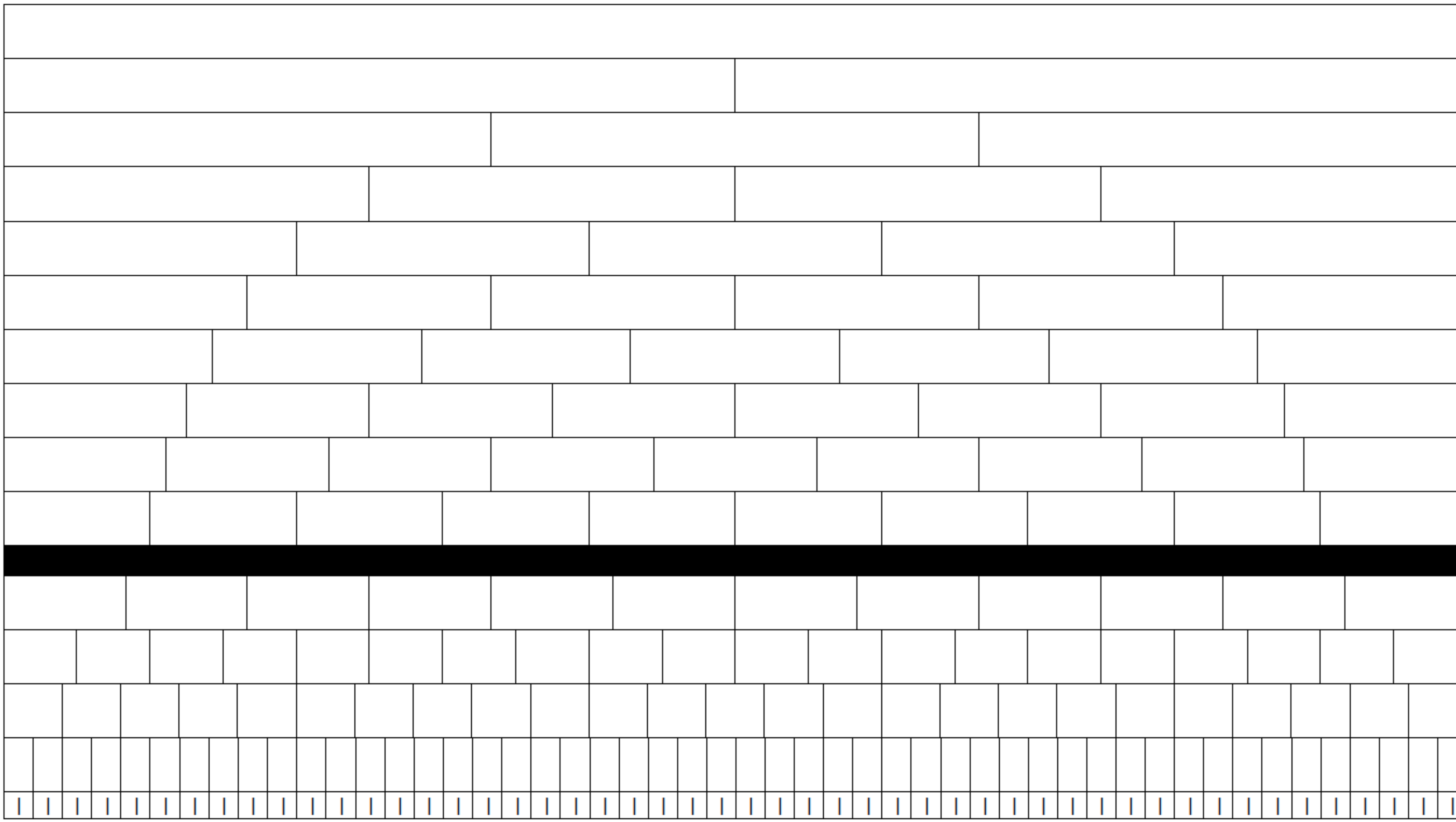
If  is 1

Then what value do each of these have?



Fractions

Fraction Walls

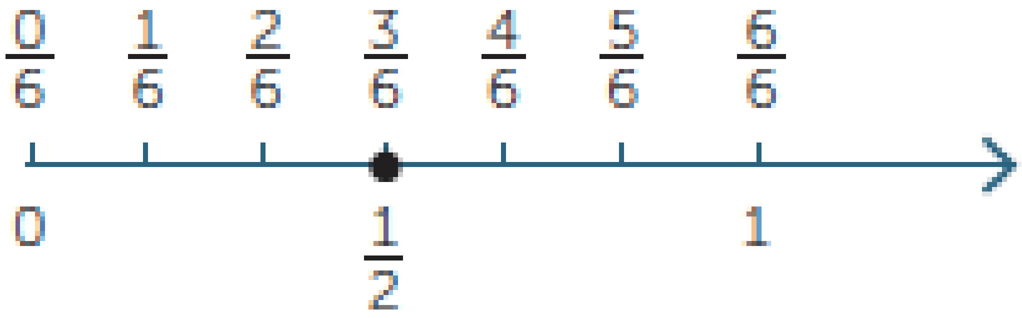


Fractions

Equivalent fractions

We say that two fractions are equivalent if they label the same place on the number line.

For example, we can represent the fractions $\frac{1}{2}$ and $\frac{3}{6}$ on the same number line.



Fractions

Equivalent fractions

Starting with a fraction, the fractions obtained by multiplying its numerator and denominator by the same whole number are equivalent.

Starting with a fraction, the fractions obtained by dividing its numerator and denominator by the same whole number are equivalent.

Fractions

Simplest form

A fraction is said to be in simplest form if the only common factor of the numerator and the denominator is 1.

To reduce a fraction to an equivalent fraction in simplest form we use the method of cancelling.

For example, when reducing $\frac{6}{8}$ to its simplest form we divide the top (numerator) and bottom (denominator) by the highest common factor of 6 and 8, which is 2 and we get $\frac{3}{4}$.

Fractions

Representing fractions - dominoes

Use a domino standing on its end as a fraction for ordering activities.

Fractions

Ordering fractions

Before students start to do arithmetic with fractions they should have a strategies for choosing the larger (or smaller) of two fractions and ordering fractions from smallest to largest (or vice-versa).

Fractions

Addition of fractions

Addition of fractions is straightforward if the denominators are the same.

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

When the denominators are different, we use equivalent fractions to express the fractions using a common denominator and then proceed exactly as before.

$$\frac{3}{4} + \frac{1}{6} = \frac{9}{12} + \frac{2}{12}$$

$$= \frac{11}{12}$$

Fractions

Subtraction of fractions

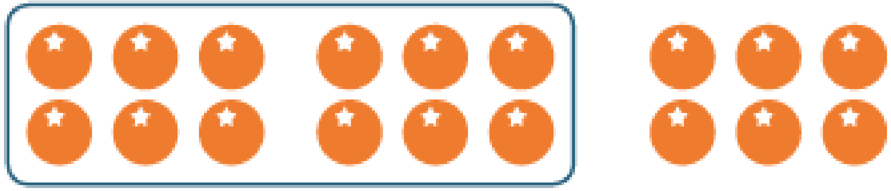
Subtracting fractions uses similar ideas to addition of fractions. If the denominators of the two fractions are equal, subtraction is straightforward.

When the denominators are different, we use equivalent fractions to express the fractions using a common denominator and then proceed exactly as before.

Fractions

Multiplication of fractions

In mathematics, when we are asked for example to find two thirds of 18 oranges, we take it to mean that we divide the 18 oranges into three equal parts and then take two of these parts.

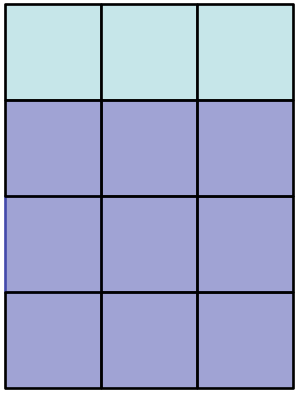


“Of” is the same as ‘x’.

Fractions

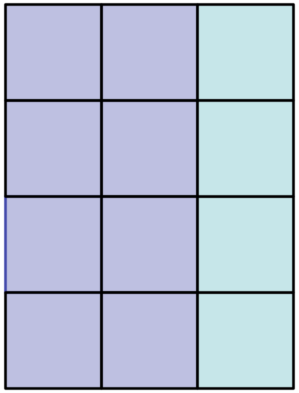
Multiplication of fractions

$\frac{3}{4}$



Fractions

Multiplication of fractions

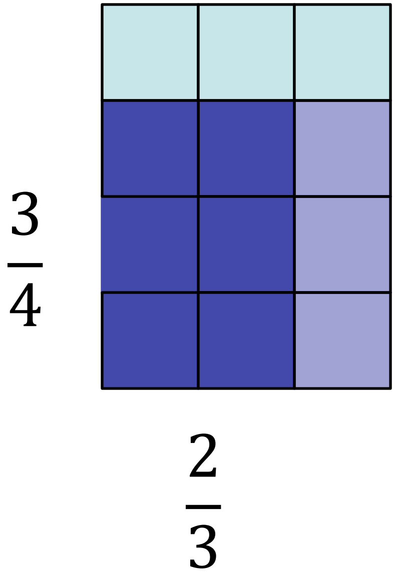


$$\frac{2}{3}$$

Fractions

Multiplication of fractions

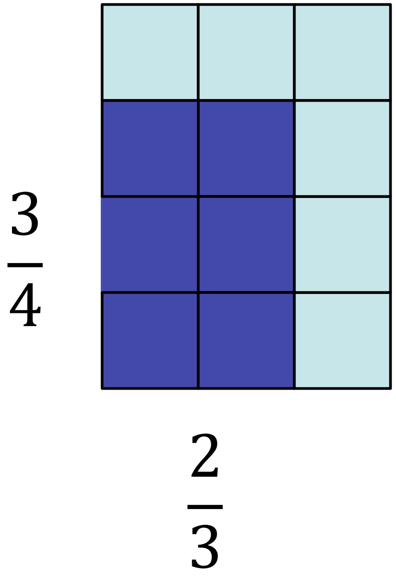
$\frac{2}{3}$ of $\frac{3}{4}$



Fractions

Multiplication of fractions

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

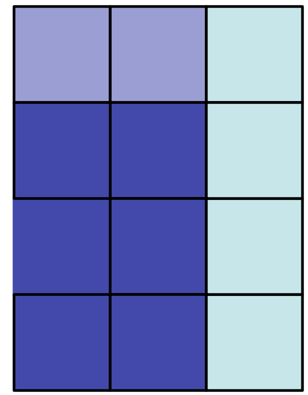


Fractions

Multiplication of fractions

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

$\frac{3}{4}$

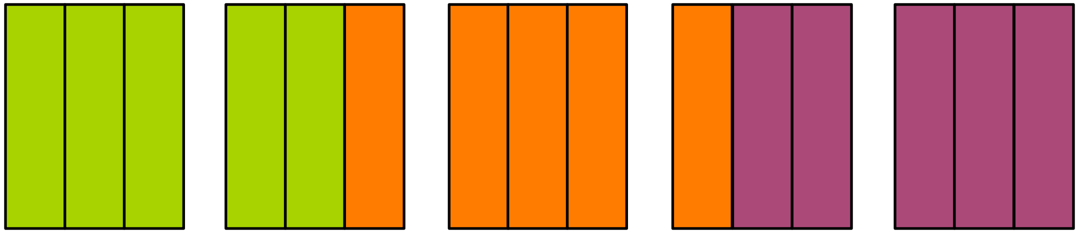


$\frac{2}{3}$

Fractions

Division of fractions

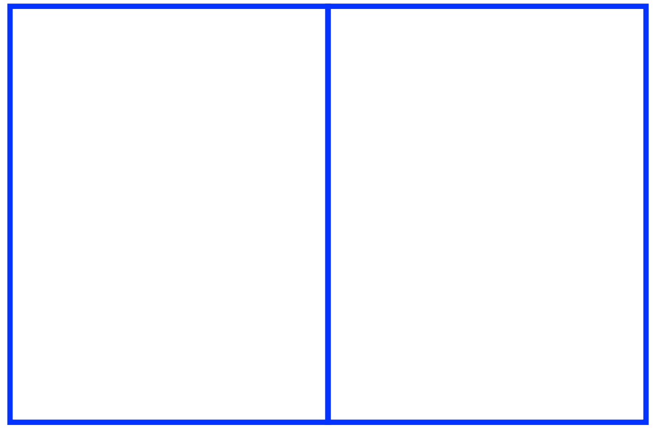
5 ÷ 3

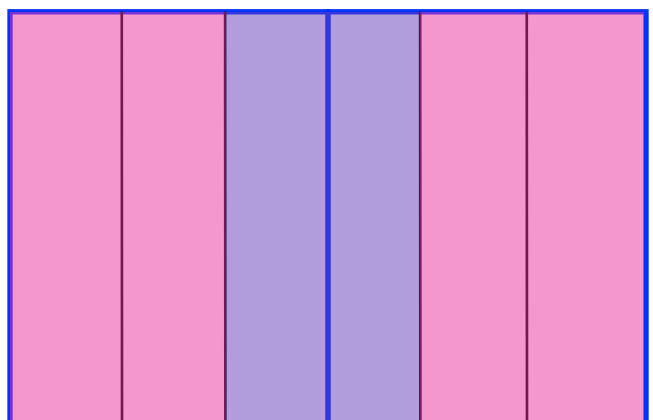


Fractions

Division of fractions

2 ÷ 3





5
3

Fractions

Fractions and Decimals

Convert these fractions to decimals

$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{7}$	$\frac{489}{1000}$
$\frac{38}{40}$	$\frac{47}{64}$	$\frac{3}{5}$	$\frac{1}{99}$

Fractions

Fractions and Decimals

Convert these fractions to decimals - which will produce a terminating decimal?

$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{7}$	$\frac{489}{1000}$
$\frac{38}{40}$	$\frac{47}{64}$	$\frac{3}{5}$	$\frac{1}{99}$

Fractions and Decimals

Look at the denominator - ‘rip it apart’ into its prime factorisation

$\frac{1}{2}$	$\frac{1}{25}$	$\frac{1}{7}$	$\frac{489}{1000}$
$\frac{38}{40}$	$\frac{47}{64}$	$\frac{3}{5}$	$\frac{1}{99}$

Fractions

Fractions and Decimals

Look at the denominator - what do you notice about the prime factorisation of the denominator?

$$\frac{1}{2} \qquad \frac{1}{25} \qquad \frac{1}{7} \qquad \frac{489}{1000}$$

$$\frac{38}{40} \qquad \frac{47}{64} \qquad \frac{3}{5} \qquad \frac{1}{99}$$

Fractions

Fractions and Decimals

Fractions with denominators that are multiples of 2s and 5s convert to terminating decimals.

$$\frac{1}{2} = 0.5 \quad \frac{1}{25} = 0.25 \quad \frac{1}{7} = 0.\overline{142857} \quad \frac{489}{1000} = 0.489$$

$$\frac{38}{40} = 0.95 \quad \frac{47}{64} = 0.734375 \quad \frac{3}{5} = 0.6 \quad \frac{1}{99} = 0.010101\ldots$$

Fractions

Fractions and Decimals

Look at the denominator - what do you notice about the prime factorisation of the denominator?

$$\frac{1}{2} = 0.5 \quad \frac{1}{25} = 0.25 \quad \frac{1}{7} = 0.\overline{142857} \quad \frac{489}{1000} = 0.489$$

$$\frac{38}{40} = 0.95 \quad \frac{47}{64} = 0.734375 \quad \frac{3}{5} = 0.6 \quad \frac{1}{99} = 0.010101\ldots$$

Fractions

Some research – Liping Ma

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

"Knowing and Teaching Elementary Mathematics" Liping Ma

Fractions

Some research – Liping Ma

$$1\frac{3}{4} \div \frac{1}{2} = 1\frac{3}{4} \div (1 \div 2)$$
$$= \quad 1\frac{3}{4} \div 1 \times 2$$
$$= \quad 1\frac{3}{4} \times 2 \div 1$$
$$= \quad 1\frac{3}{4} \times (2 \div 1)$$
$$= \quad 1\frac{3}{4} \times 2$$

Making sense of the algorithm

"Knowing and Teaching Elementary Mathematics" Liping Ma

Fractions

Some research – Liping Ma

$$1\frac{3}{4} \div \frac{1}{2} = (1\frac{3}{4} \times \frac{2}{1}) \div (\frac{1}{2} \times \frac{2}{1})$$

$$= (1\frac{3}{4} \times \frac{2}{1}) \div 1$$

$$= 1\frac{3}{4} \times \frac{2}{1}$$

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

Maintaining the value of the quotient

"Knowing and Teaching Elementary Mathematics" Liping Ma

Fractions

Some research – Liping Ma

$$1\frac{3}{4} \div \frac{1}{2} \quad = 1.75 \div 0.5 = 3.5$$

Dividing by fractions using decimals

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Fractions

Some research – Liping Ma

$$
\begin{aligned}
1\frac{3}{4} \div \frac{1}{2} &= (1 + \frac{3}{4}) \div \frac{1}{2} \\
&= (1 + \frac{3}{4}) \times \frac{2}{1} \\
&= (1 \times 2) + (\frac{3}{4} \times 2) \\
&= 2 + 1\frac{1}{2} \\
&= 3\frac{1}{2}
\end{aligned}
$$

$$
\begin{aligned}
1\frac{3}{4} \div \frac{1}{2} &= (1 + \frac{3}{4}) \div \frac{1}{2} \\
&= (1 \div \frac{1}{2}) + (\frac{3}{4} \div \frac{1}{2}) \\
&= 2 + 1\frac{1}{2} \\
&= 3\frac{1}{2}
\end{aligned}
$$

Applying the distributive law

“Knowing and Teaching Elementary Mathematics” Liping Ma

Fractions

Some research – Liping Ma

$$
\begin{aligned}
1\frac{3}{4} \div \frac{1}{2} &= \frac{7}{4} \div \frac{1}{2} \\
&= \frac{7 \div 1}{4 \div 2} \\
&= \frac{7}{2} \\
&= 3\frac{1}{2}
\end{aligned}
$$

You don’t have to multiply

“Knowing and Teaching Elementary Mathematics” Liping Ma

Fractions

Always, sometimes, never questions

A whole number can not be written as a fraction

When comparing fractions, the fraction with the bigger number in the denominator is always smaller

There is no such thing as a smallest fraction

Every fraction can be written as a decimal

Ratio

Ratios provide a way of comparing two or more related quantities.

Ratios are closely connected to fractions, but in many problems they are more convenient to use than fractions.

Fractions

Ratio

The ratio, by weight, of butter to flour in a biscuit dough is 2 : 7. What fraction of the biscuit dough is flour?

Solution

There are 2 + 7 = 9 equal parts, 7 of which are flour.

Hence fraction of flour in the dough = $\frac{7}{9}$.

Fractions

Ratio

For example, in the photograph of a train (taken from the page of a textbook), the scale is 1 : 200.

A scale drawing has *exactly* the same shape as the original object, but a different size. All the lengths of the original object are reduced or magnified in the drawing in exactly the same ratio. This ratio is called the **scale** of the drawing.

Scale = length on the drawing : length on the actual object

The scale of a drawing can be given as the ratio of two numbers. For example, in the photograph of a train below, the scale is 1 : 200.

Scale = 1 : 200

This means that a length of 1 cm on the photograph corresponds to a length of 200 cm, or 2 m, on the actual carriage. Thus, the scale can also be written as:

Scale = 1 cm : 2 m

Fractions

Ratio

Students in years 6 to 8 should be involved in very practical exercises to do with ratio:

- cordial mixing
- recipes
- scale drawing

Fractions

History

In general, ancient civilisations avoided fractions by giving special names to parts of various measures.

We still do this today. For example, instead of saying $1\,\frac{13}{60}$ hours we say 1 hour 13 minutes.

Fractions

History

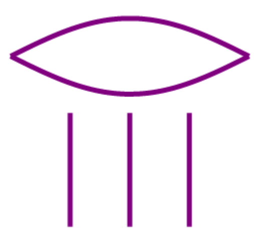
Egyptian fraction notation was developed in the Middle Kingdom of Egypt (2080–1640 BC), altering the Old Kingdom's Eye of Horus numeration system.

Fractions

History

With few exceptions they wrote all their fractions as unit fractions, that is, with numerator 1.

To write the unit fractions used in their Egyptian fraction notation the Egyptians placed the hieroglyph  above the numeral for the denominator.

For example $\frac{1}{3}$ = 

Fractions

History

There were separate symbols for some common non-unit fractions such as $\frac{2}{3}$ and $\frac{3}{4}$ but most fractions, as we know them, were expressed as a sum of unit fractions.

For example $\frac{2}{7}$ can be written as

$$\frac{1}{7} + \frac{1}{14} + \frac{1}{21} + \frac{1}{42}$$

Fractions

History

Up until the Hellenistic period the Greeks preferred to think of fractions in terms of ratios and proportions. They did not tend to think of them as we do, and certainly not as points on the number line.

Fractions

History

Hindu mathematicians are believed to be the first to indicate fractions with numbers rather than words. Brahmagupta (c. 628) and Bhaskara (c. 1150) were early Hindu mathematicians who wrote fractions as we do today, but without the bar (vinculum). They wrote one number above the other to indicate a fraction.

Fractions

History

The next step in the evolution of fraction notation was the addition of the horizontal fraction bar. This is generally credited to the Arabs who used the Hindu notation, then improved on it by inserting this bar in between the numerator and denominator, which was later named the vinculum. Later on, Fibonacci (c.1175-1250), was the first European mathematician to use the vinculum as it is used today.

Fractions

In everyday life

Liquids	
METRIC	CUP
30ml	100°
60ml	1/4 cup
80ml	1/3 cup
125ml	1/2 cup
180ml	3/4 cup
250ml	1 cup
310ml	1 1/4 cups
375ml	1 1/2 cups
430ml	1 3/4 cups
500ml	2 cups
625ml	2 1/2 cups
750ml	3 cups
1L	4 cups
1.25L	5 cups
1.5L	6 cups
2L	8 cups
2.5L	10 cups

Cup and Spoon Sizes	
CUP	Metric
¼	60ml
1/3	80ml
½	125ml
1 cup	250ml
SPOON	
1/4 teaspoon	1.25ml
1/2 teaspoon	2.5ml
1 teaspoon	5ml
1 tablespoon	(4 teaspoons) 20ml

MUFFIN PANS		
Mini	30ml	1 1/2 Tbs
Regular 1	80ml	1/3 cup
Regular 2	125ml	1/2 cup
Texas	180ml	3/4 cup
	Source: www.taste.com.au	

Fractions

In everyday life

Combination Spanner Set Sizes:

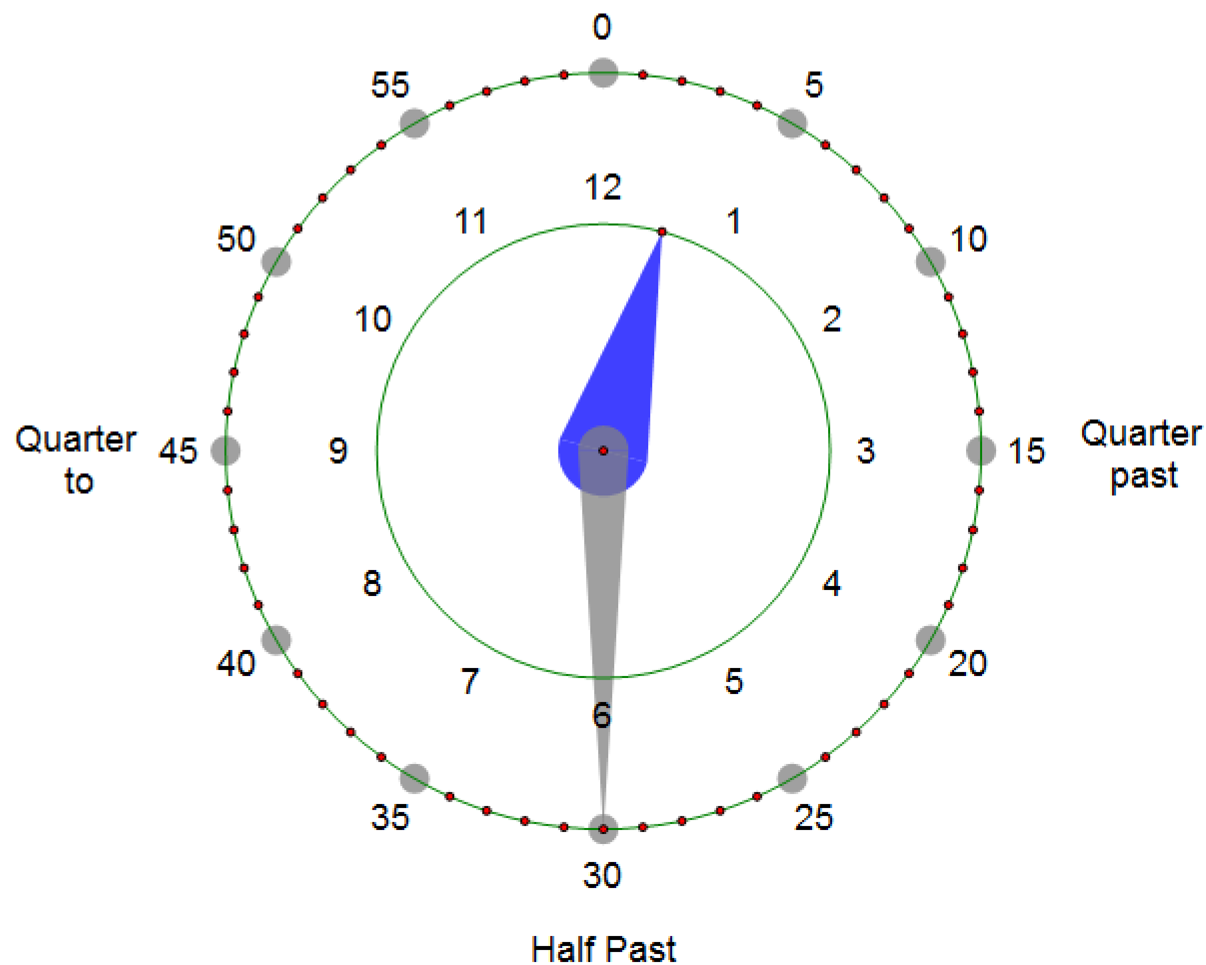
- Imperial: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1"
- Metric: 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 22, 24mm

Flare Nut Spanner Set Sizes:

- Imperial: 3/8 x 7/16, 1/2 x 9/16, 5/8 x 11/16"
- Metric: 10 x 11, 12 x 13, 15 x 17mm

Fractions

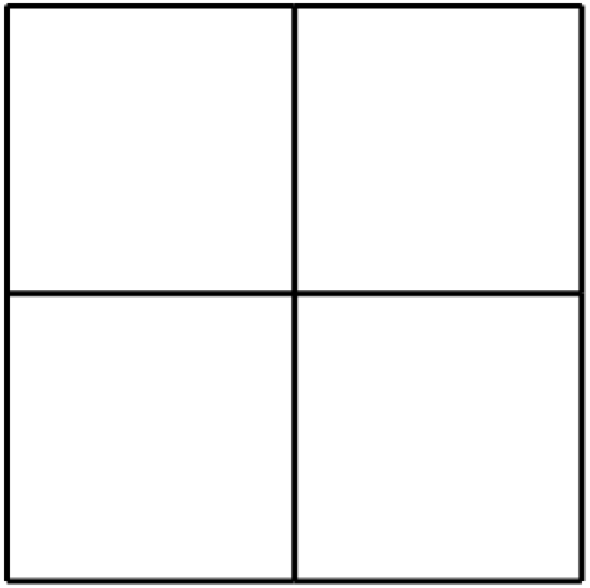
In everyday life



Fractions

Addition: Using a Grid

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



Fractions

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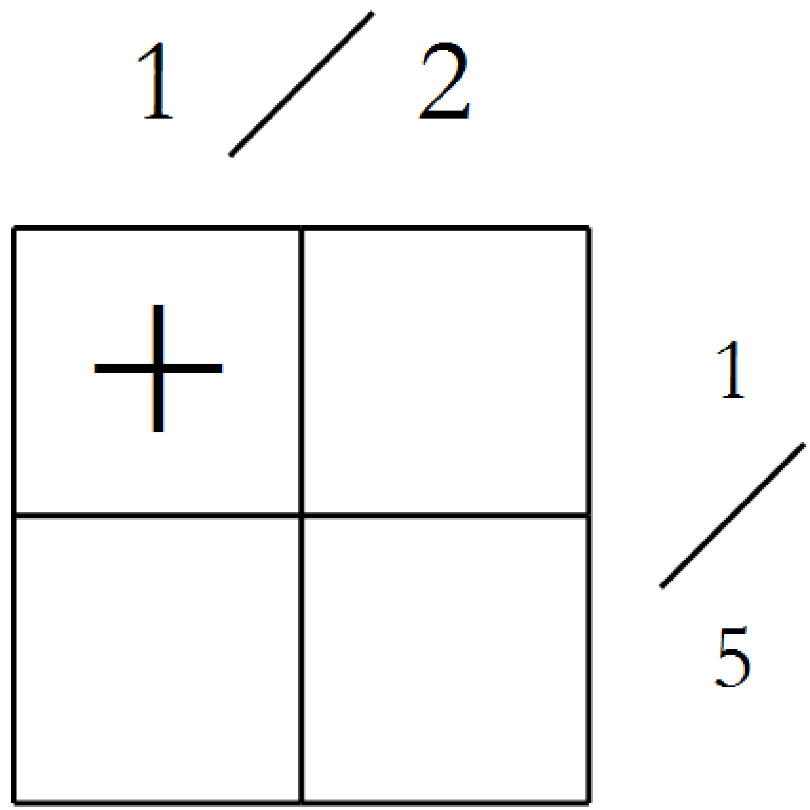

Fractions

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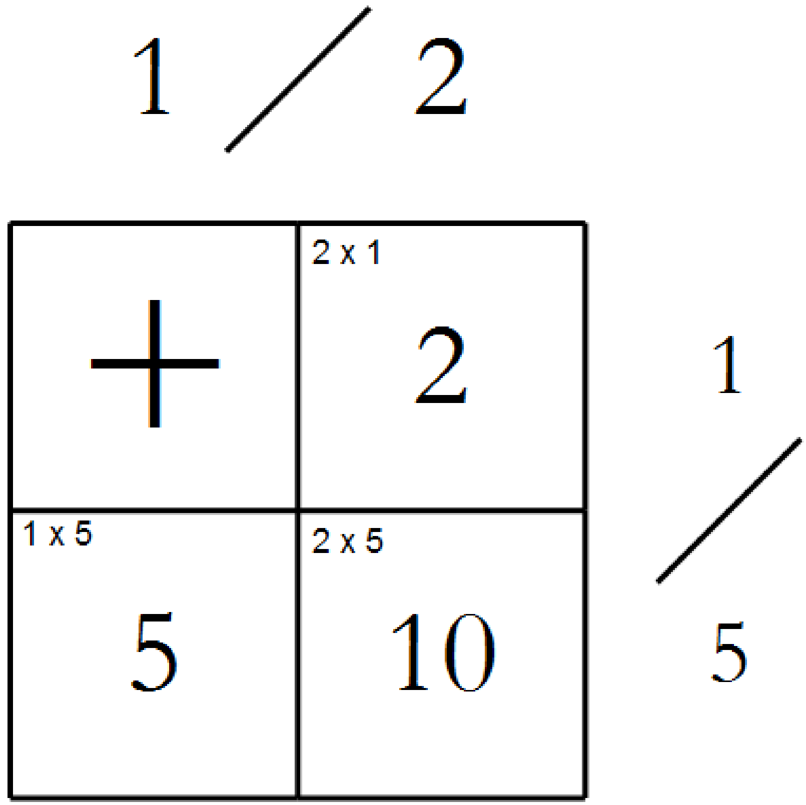

Fractions

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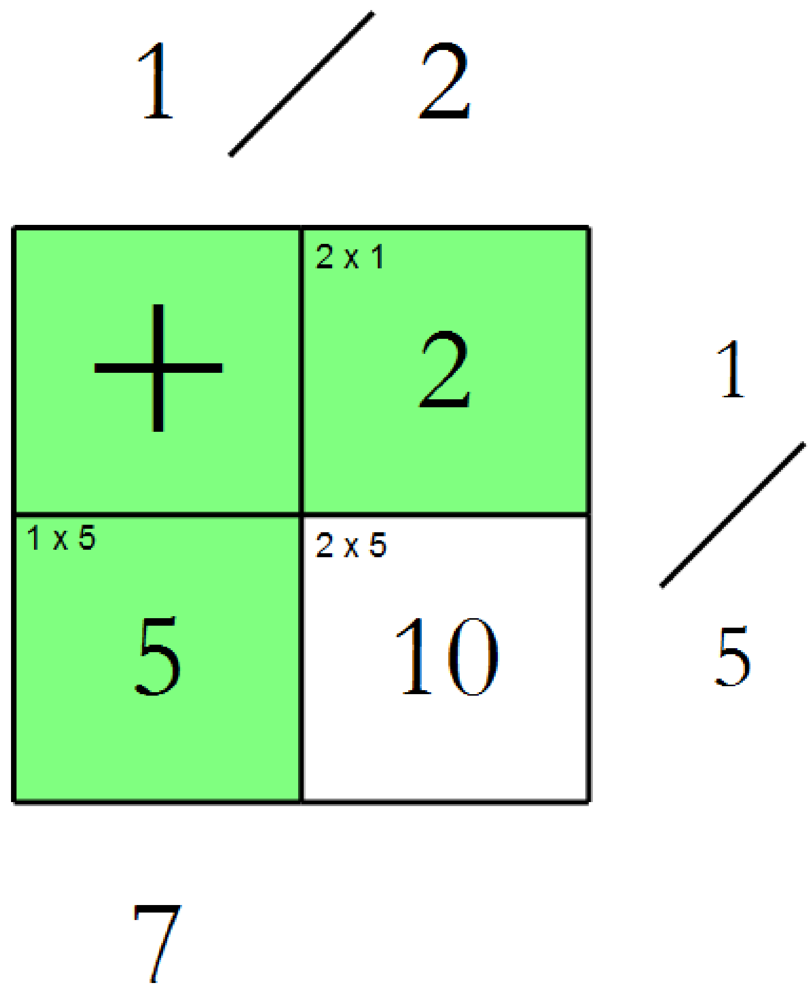

Fractions

Addition: Using a Grid

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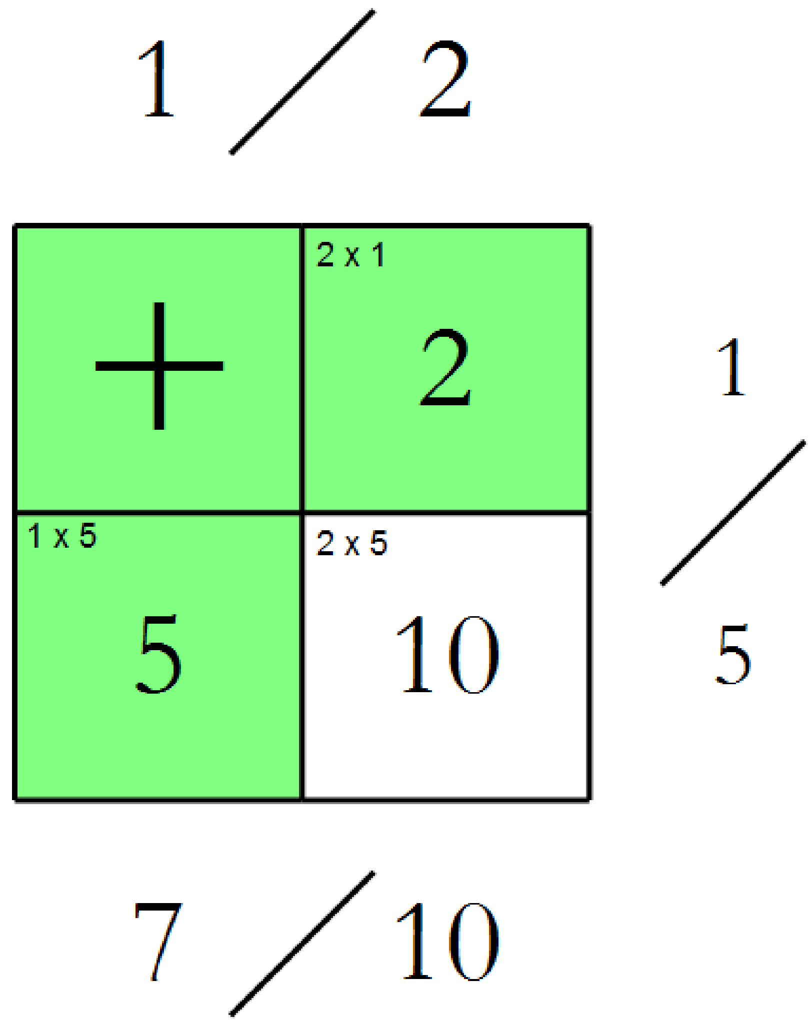
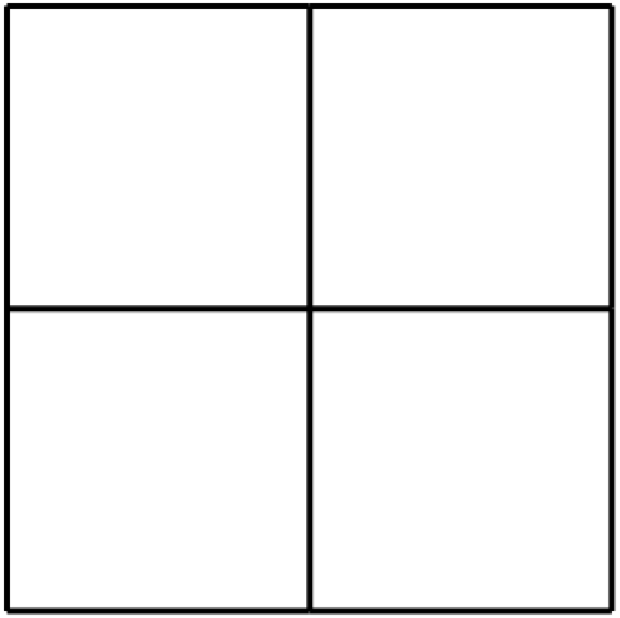


Fractions

Subtraction: Using a Grid

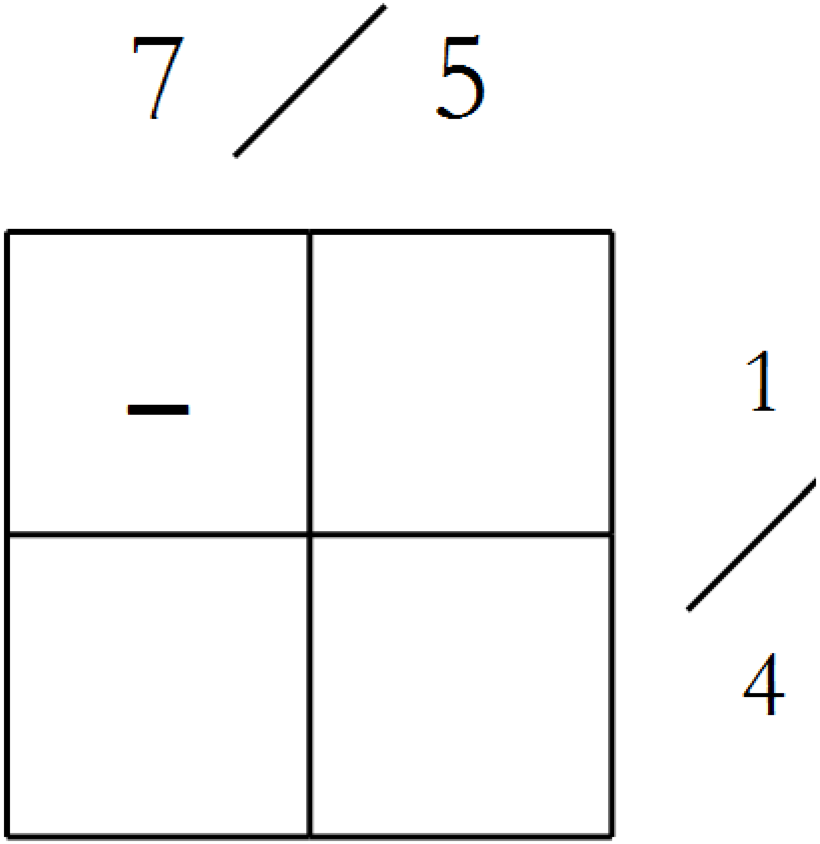
$$\frac{7}{5} - \frac{1}{4}$$



Fractions

Subtraction: Using a Grid

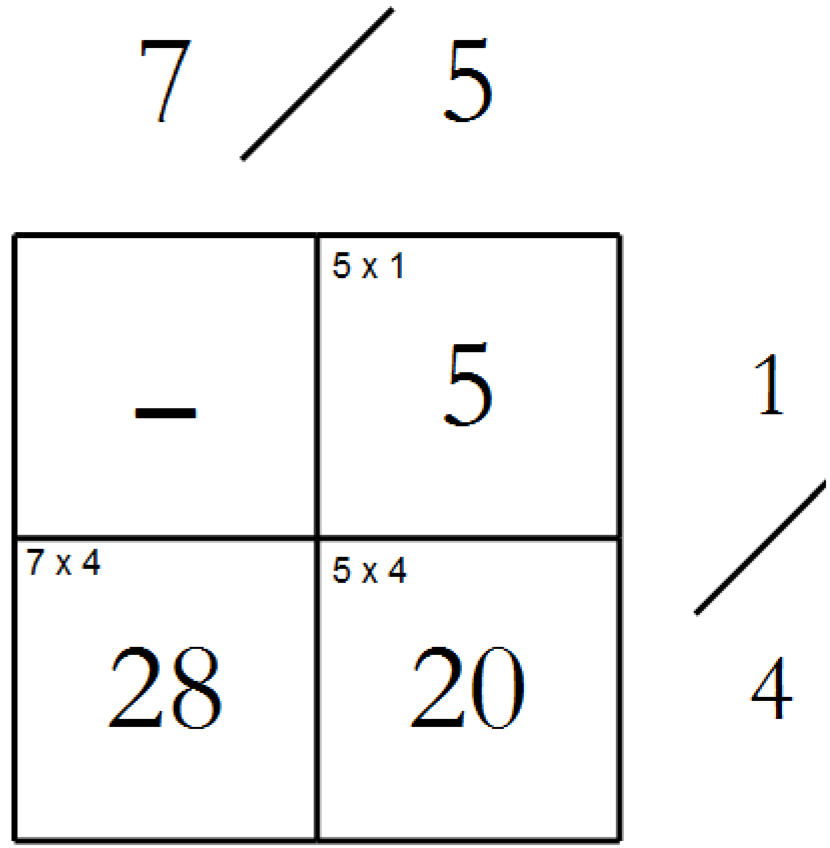
$$\frac{7}{5} - \frac{1}{4}$$



Fractions

Subtraction: Using a Grid

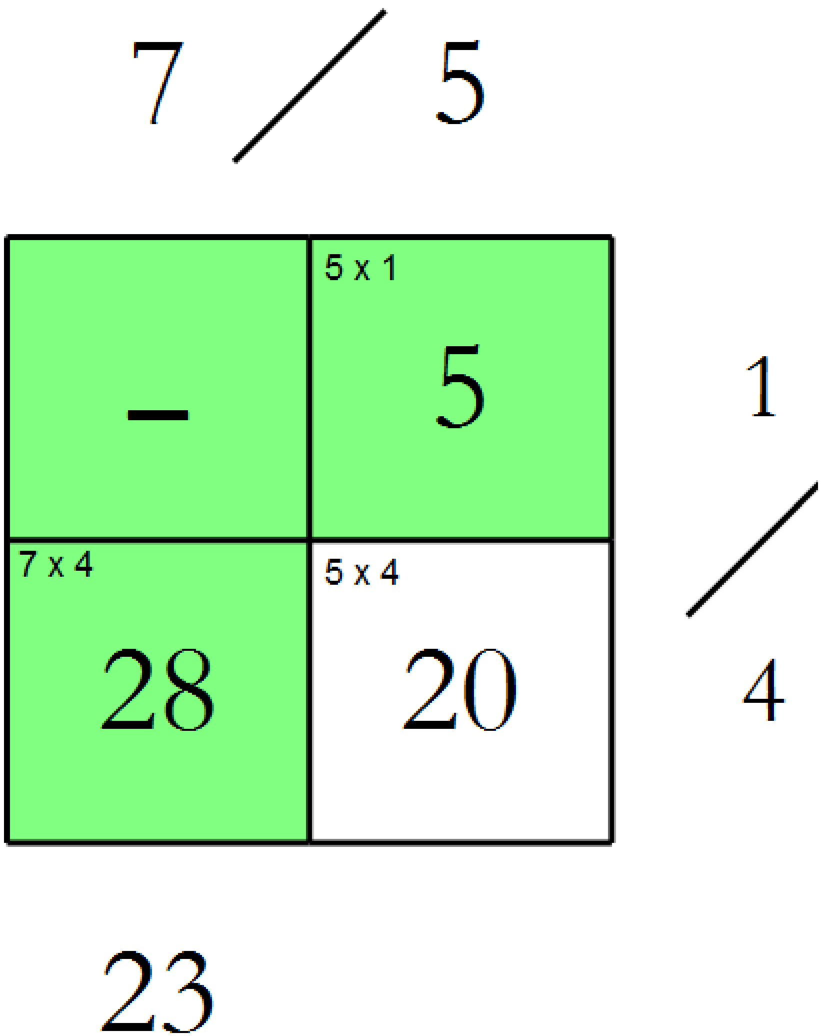
$$\frac{7}{5} - \frac{1}{4}$$



Fractions

Subtraction: Using a Grid

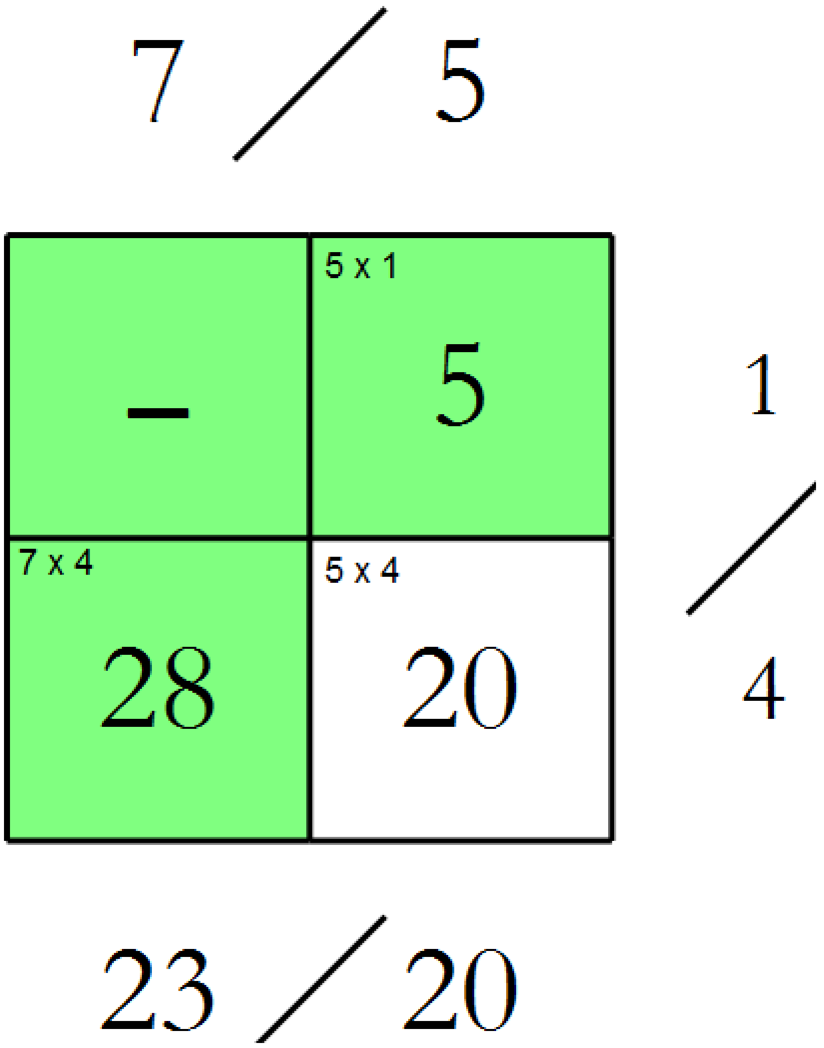
$$\frac{7}{5} - \frac{1}{4}$$



Fractions

Subtraction: Using a Grid

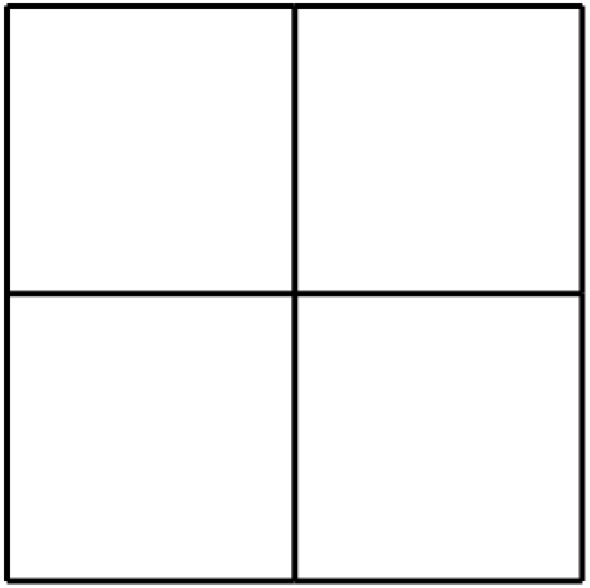
$$\frac{7}{5} - \frac{1}{4}$$



Fractions

Multiplication: Using a Grid

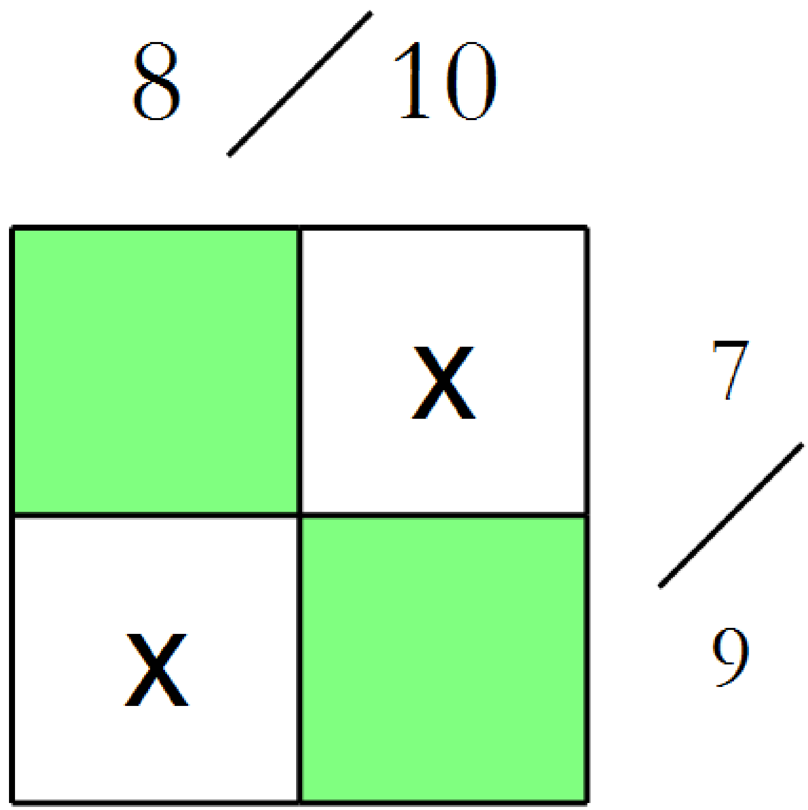
$\frac{8}{10} \times \frac{7}{9}$



Fractions

Multiplication: Using a Grid

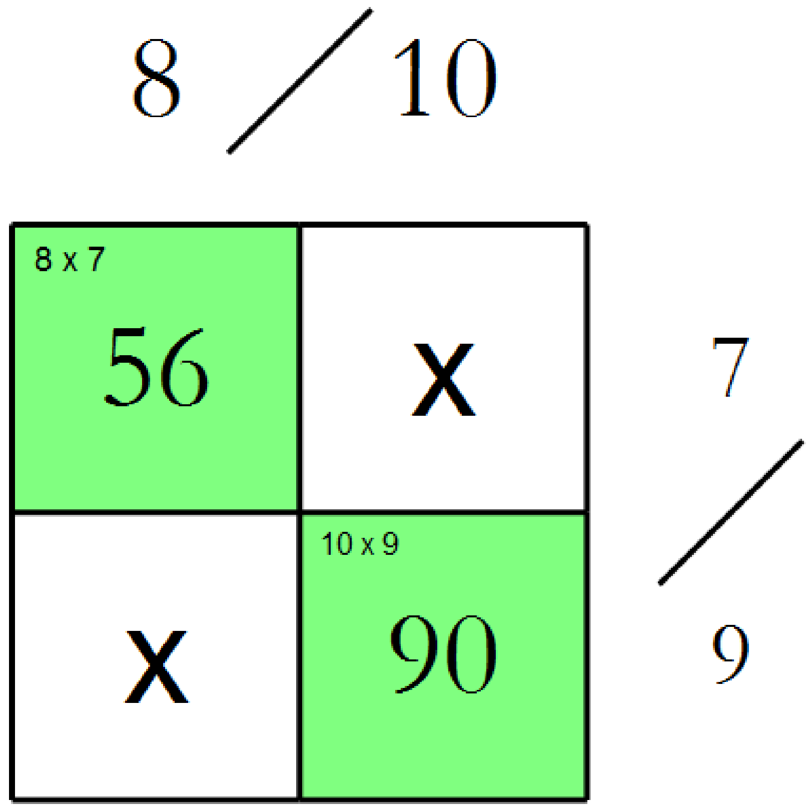
$$\frac{8}{10} \times \frac{7}{9}$$



Fractions

Multiplication: Using a Grid

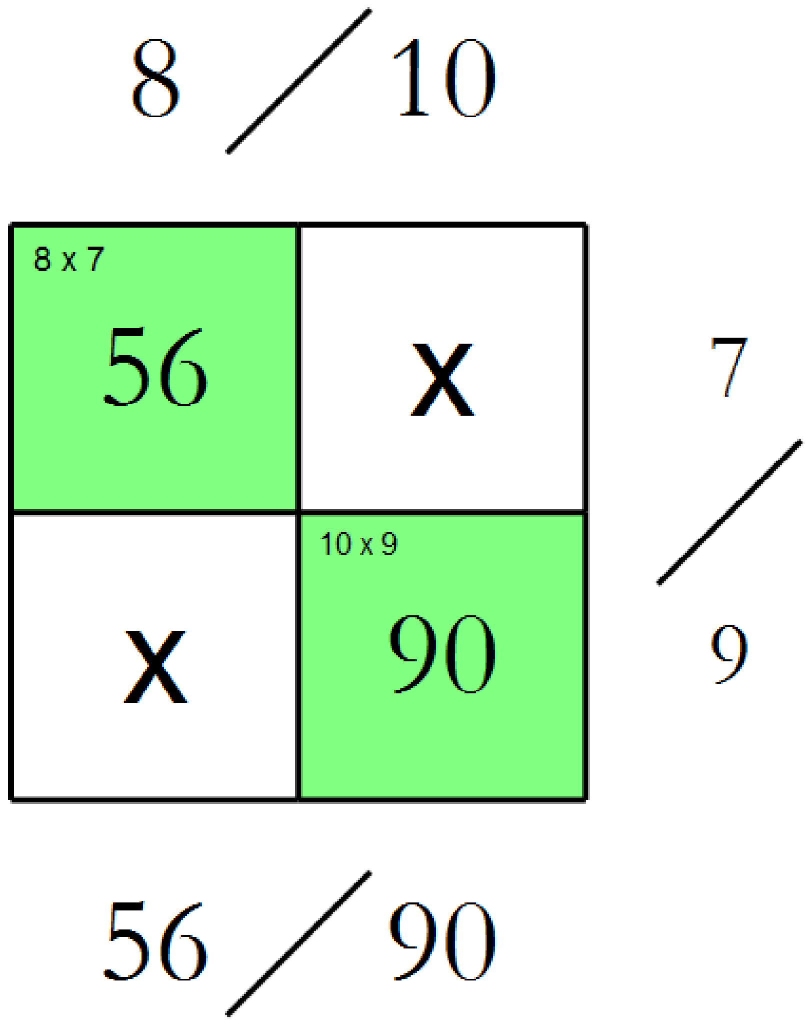
$$\frac{8}{10} \times \frac{7}{9}$$



Fractions

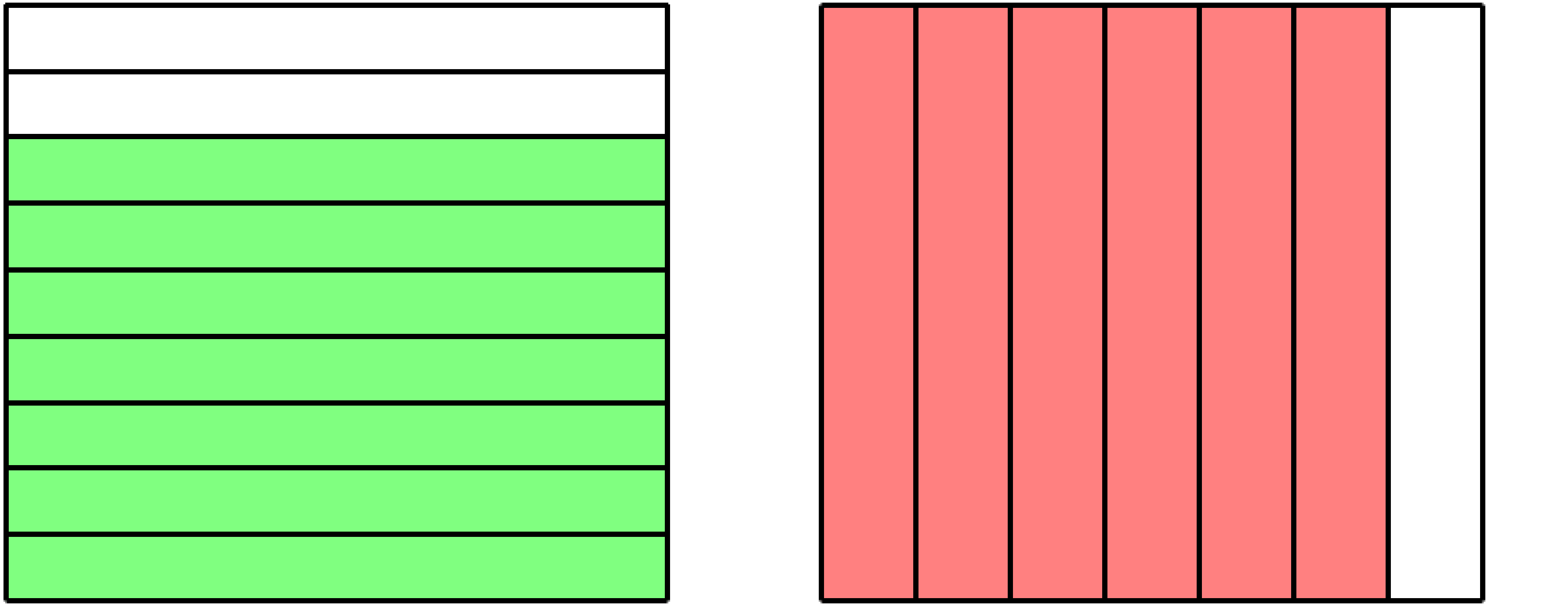
Multiplication: Using a Grid

$$\frac{8}{10} \text{ x } \frac{7}{9}$$



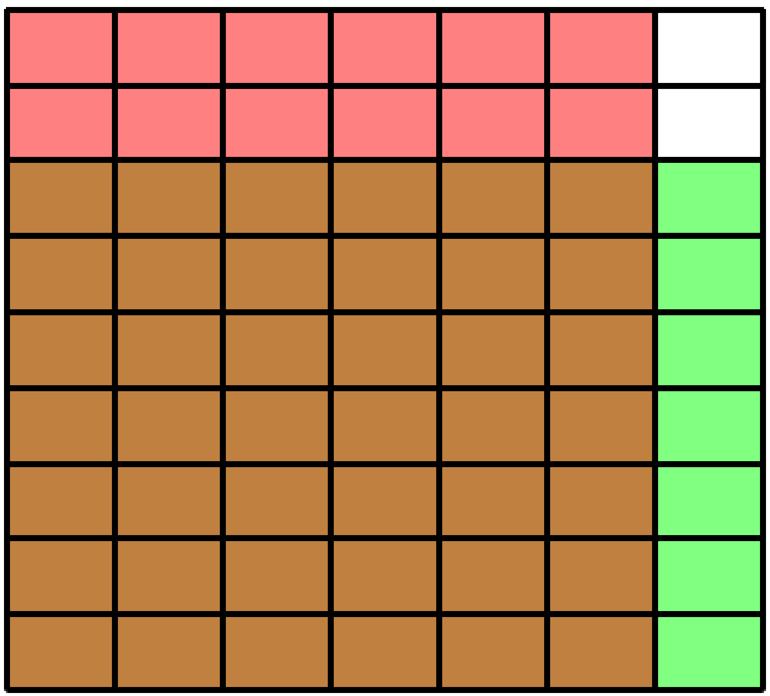
Fractions

$$\frac{7}{9} \times \frac{6}{7}$$



Fractions

$\frac{7}{9}$ x $\frac{6}{7}$



The number of double shaded “squares is the numerator, eg: 7 x 6 = 42

The total number of “squares” is the denominator: eg 9 x 7 = 63

So $\frac{7}{9} \times \frac{6}{7} = \frac{42}{63}$

Fractions

Division of fractions

Stay change flip process

The first term "stays" the same

$$\frac{1}{2} \div \frac{3}{5} = \frac{1}{2} \times \frac{5}{3}$$

The last term "flips"

The operation changes from division to multiplication

Fractions

As “suspended” divisions

Connected to exact values.
In +, - and x we almost always carry out the calculation immediately. Not so with division.

Relates to $\sqrt{\quad}$, logs, exponentials

Fractions

Order of operations and algebra

Take the fraction addition: $\frac{2}{5} + \frac{3}{4}$

Instead of calculating each step, leave the operations visible

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

Fractions

Order of operations and algebra

Now consider : $\frac{3}{7} + \frac{2}{5}$

What is the missing term?

$$\frac{3 \times \square + 2 \times 7}{7 \times 5}$$

Fractions

Algebraic fractions

Now consider : $\frac{x}{7} + \frac{2}{5}$

What does this become?

Fractions

Algebraic fractions

And if: $\frac{x}{7} + \frac{2}{5} = \frac{58}{70}$

What is the value of x?

AMSI - Schools

The Team

Schools Manager	Janine McIntosh	janine@amsi.org.au
Outreach Manager	Michael O'Connor	moconnor@amsi.org.au

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WA