millions	100,000s	10,000s	1000s	100s	10s	1s
2	5	4	3	2	4	1

In order from smallest to largest

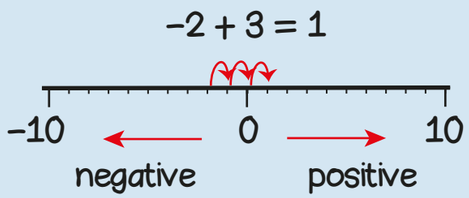
2,043,241 2,764,406 2,870,540

Stop and look.
What do you notice?

two million, five hundred and forty-three thousand, two hundred and forty-one

2 millions, 5 hundred thousands, 4 ten thousands, 3 thousands, 2 hundreds, 4 tens and 1 one

-2 + 3 = 1



5 or more - round up
4 or less - round down

Round to the nearest million .

2,643,278 → 3,000,000

Multiplying and dividing by 10, 100 and 1000

	M	HTh	TTh	Th	100s	10s	1s	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Ten times greater						1	3	6		
					1	3	6			
			1	3	6	0	0			
Ten times smaller							1	3	6	
							0	1	3	6

13.6 x 10 move digits one place left

13.6 x 1000 move digits 3 places left

13.6 ÷ 10 move digits one place right

13.6 ÷ 100 move digits 2 places right

millions
digit
round
multiple
positive
negative

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

A prime number has exactly 2 factors:
2, 3, 5, 7, 11, 13, 17, 19...

15 and 21 have the common factors 1 and 3

15 and 21 are common multiples of 3

prime
common
multiple
factor
multiplier
divisor

If I know...
then I also know...
because...

0.8 × 7 = 8 × 7 ÷ 10

4.2 × 5 = 42 ÷ 2

56,000 ÷ 80 = 700

$$\begin{array}{r} 2427 \\ \times\ 38 \\ \hline 19416 \\ 72810 \\ \hline 92226 \\ {\scriptstyle 1\ 1} \end{array}$$

$$\begin{array}{r} 0139\text{r}3 \\ 24\overline{)3339} \end{array}$$

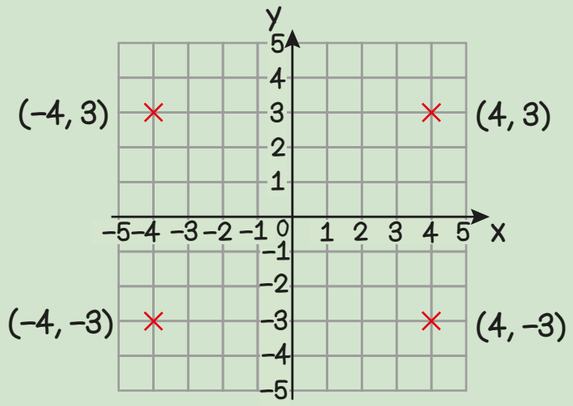
$$\begin{array}{r} 0139.125 \\ 24\overline{)3339.000} \end{array}$$

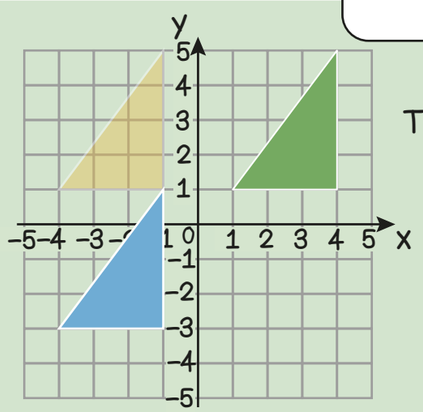
1	24
2	48
4	96
5	120
8	192
10	240

3339 ÷ 24 = 139 r3 = $139\frac{3}{24}$

= 139.13 (to 2dp)

Year 6 Term 1

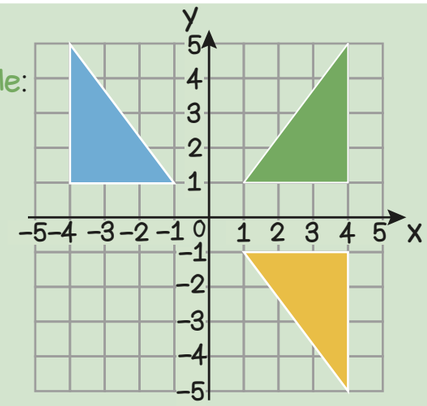




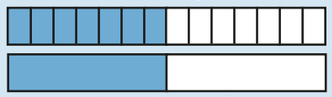
Translate the triangle
5 squares left and
4 squares down.

object
image
plot
reflect
translate

Reflect the triangle:
in the x axis
in the y axis



Simplify $\frac{7}{14}$



7 and 14 have the common factor 7

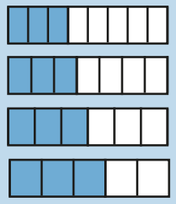
$\frac{7}{14} = \frac{1}{2}$ (÷ 7 above and below)

Compare

$\frac{3}{8} < \frac{3}{7}$

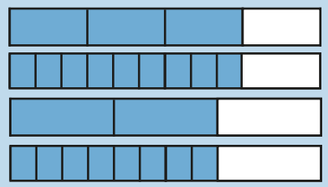
$\frac{3}{7} < \frac{3}{6}$

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



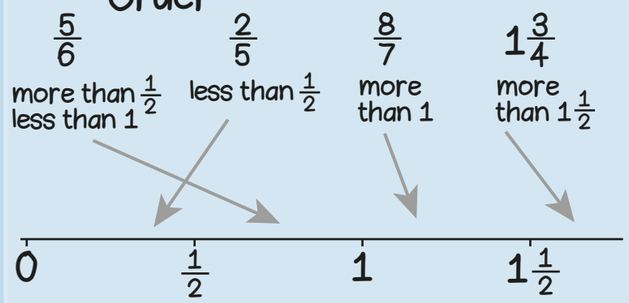
The larger the denominator the smaller the equal parts.

$\frac{3}{4}$ and $\frac{2}{3}$ have the common denominator 12



so $\frac{3}{4} > \frac{2}{3}$ because $\frac{9}{12} > \frac{8}{12}$

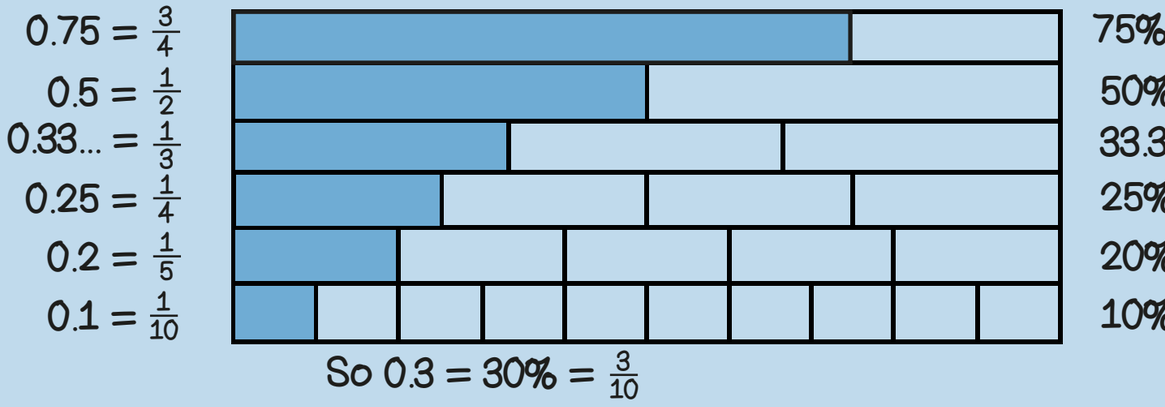
Order



Order of Operations

$6 - 2 + 4 = 8$	Only addition and subtraction - complete the calculation from left to right
$6 \div 2 \times 4 = 12$	Only multiplication and division - complete the calculation from left to right
$6 + 4 \times 2 = 14$	Complete multiplication before addition or subtraction
$(6 + 4) \times 2 = 20$	Complete the calculations in brackets first
$6^2 + 4 \div 2 = 20$	Calculate indices before other operations

If I know... then I also know... because...



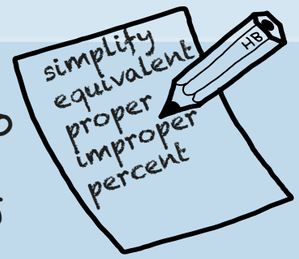
So 0.3 = 30% = $\frac{3}{10}$

$\frac{1}{5} = 0.2$ so

$\frac{2}{5} = 0.125$

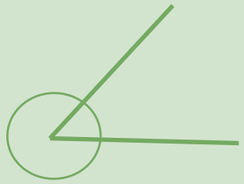
$\frac{1}{4} = 0.25 = \frac{2}{8}$ so

$\frac{1}{8} = 0.125$

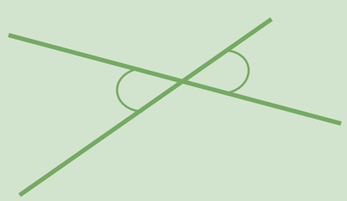


Year 6 Term 2

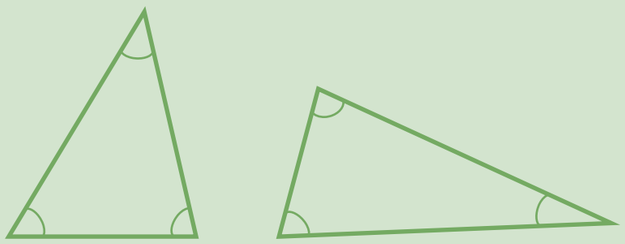
The sum of the angles at a point on a straight line is 180°



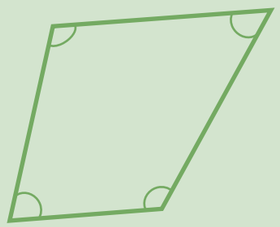
The sum of the angles at a point is 360°



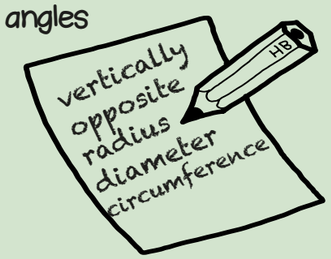
Vertically opposite angles are equal



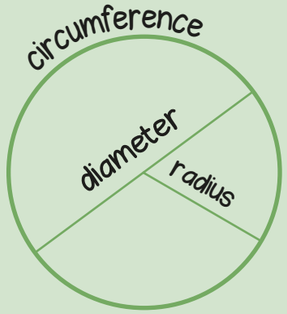
The sum of the angles in a triangle is 180°

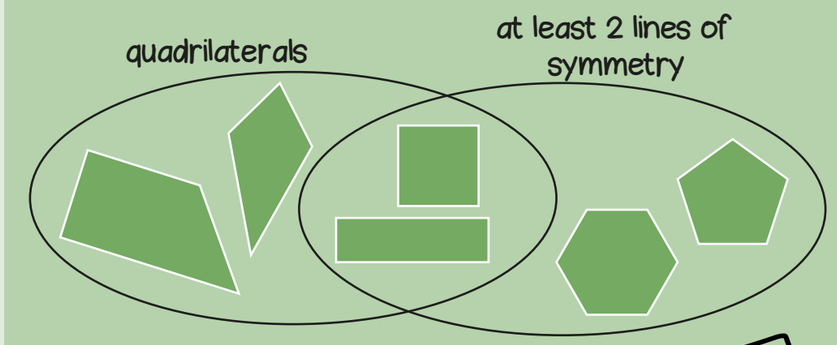


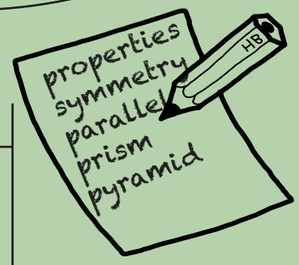
The sum of the angles in a quadrilateral is 360°



Parts of circle



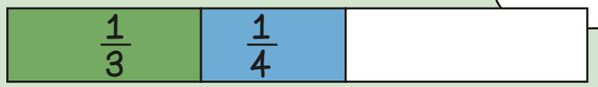




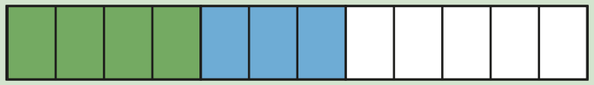
	curved surface	no curved surface
prism		
not a prism		

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

I can't describe the sum!.



$\frac{1}{3} = \frac{4}{12}$ $\frac{1}{4} = \frac{3}{12}$ Find a common denominator.



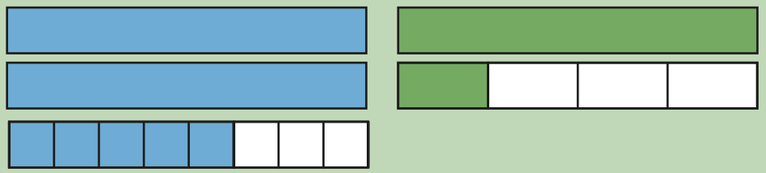
$\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

so

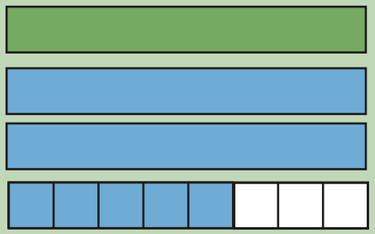
$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$

I can add fractions with the same denominator.

Adding mixed numbers. $2\frac{5}{8} + 1\frac{1}{4}$

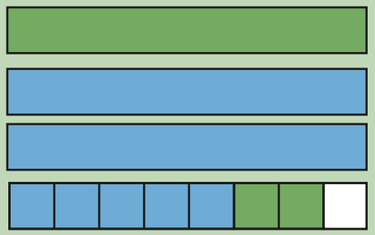


Add the whole numbers.



Add the fractions by finding a common denominator.

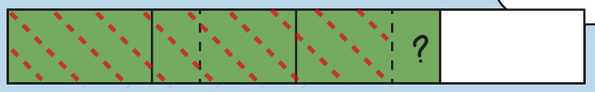
$\frac{1}{4} = \frac{2}{8}$



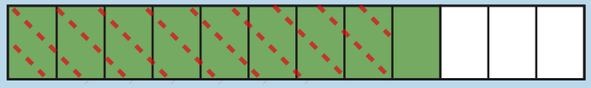
$= 3\frac{5}{8} + \frac{2}{8}$ $= 3\frac{7}{8}$

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

I can't describe the part that is left!.



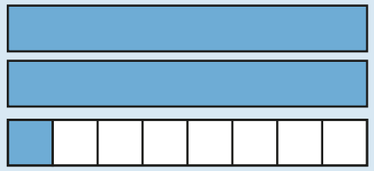
$\frac{3}{4} = \frac{9}{12}$ $\frac{2}{3} = \frac{8}{12}$ Find a common denominator.



$\frac{9}{12} - \frac{8}{12} = \frac{1}{12}$

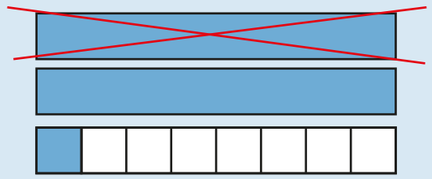
I can subtract fractions with the same denominator.

Subtracting mixed numbers.



$2\frac{1}{8} - 1\frac{1}{4}$

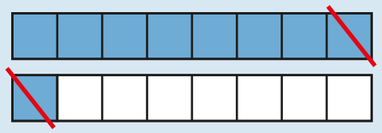
Subtract the whole numbers.



$= 1\frac{1}{8} - \frac{1}{4}$

Subtract the fraction by finding a common denominator.

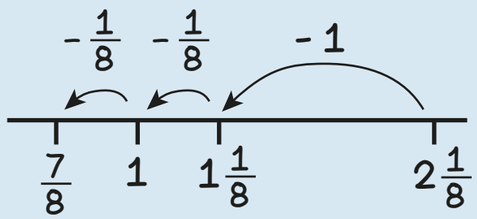
$\frac{1}{4} = \frac{2}{8}$



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

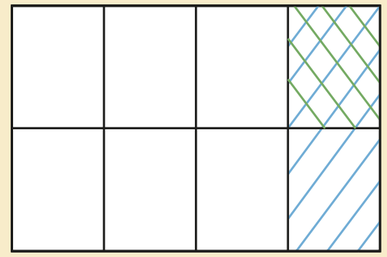
$= \frac{7}{8}$

Or on a number line.



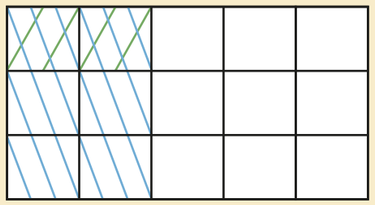
$\frac{1}{2}$ of $\frac{1}{4} = \frac{1}{8}$

$\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ $\frac{1}{4} \div 2 = \frac{1}{8}$

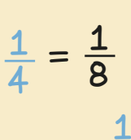


$\frac{1}{3}$ of $\frac{2}{5} = \frac{2}{15}$

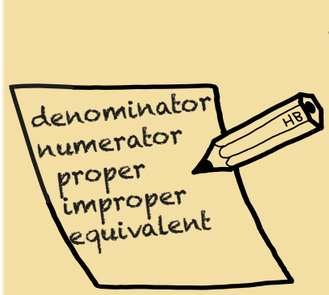
$\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$ $\frac{2}{5} \div 3 = \frac{2}{15}$

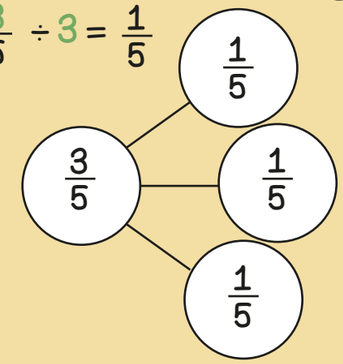


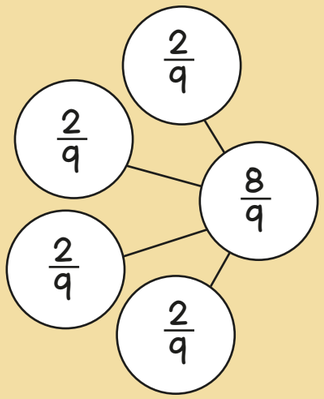
Year 6 Term 3



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







$\frac{8}{9} \div 4 = \frac{2}{9}$

Year 6 Term 4

M	HTh	TTh	Th	100s	10s	1s	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					1	3 •	6		
				1	3	6			
		1	3	6	0	0			
						1 •	3	6	
						0 •	1	3	6

Ten times greater

Ten times smaller

Converting units by multiplying and dividing by 10, 100 and 1000

13.6 x 10
move digits 1 place left

13.6 x 1000
move digits 3 places left

13.6 ÷ 10
move digits 1 place right

13.6 ÷ 100
move digits 2 places right

1m = 100 cm
13.6 x 100 = 1360
so 13.6m = 1360cm

1cm = 10 mm
13.6 x 10 = 136
so 13.6cm = 136mm

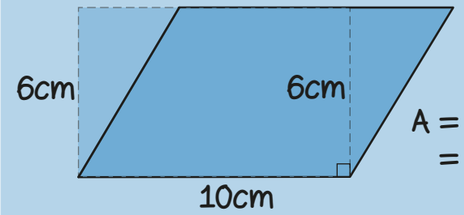
1km = 1000 m
13.6 x 1000 = 13600
so 13.6km = 13,600m

When converting from a larger unit to a smaller unit, multiply because there will be more of them.

1l = 1000 ml
13600 ÷ 1000 = 13.6
so 13,600ml = 13.6litres

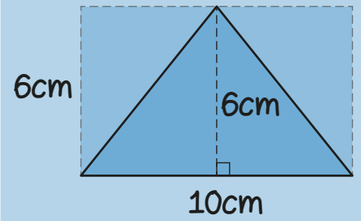
1kg = 1000 g
1360 ÷ 1000 = 1.36
so 1360g = 1.36kg

Area of a parallelogram
= base x perpendicular height



A = 10 x 6
= 60cm²

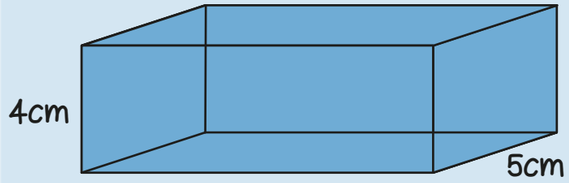
Area of a triangle
= ½ x base x perpendicular height



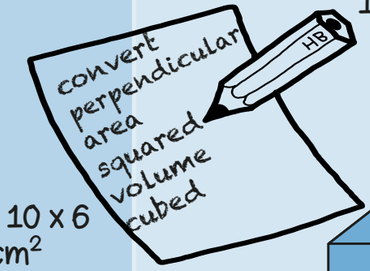
A = ½ x 10 x 6
= 30cm²

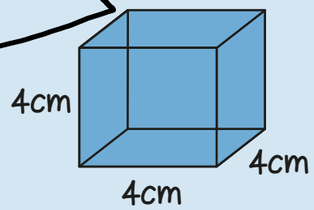
A = 10 x 6 ÷ 2
= 30cm²

Volume of a cuboid = length x width x height

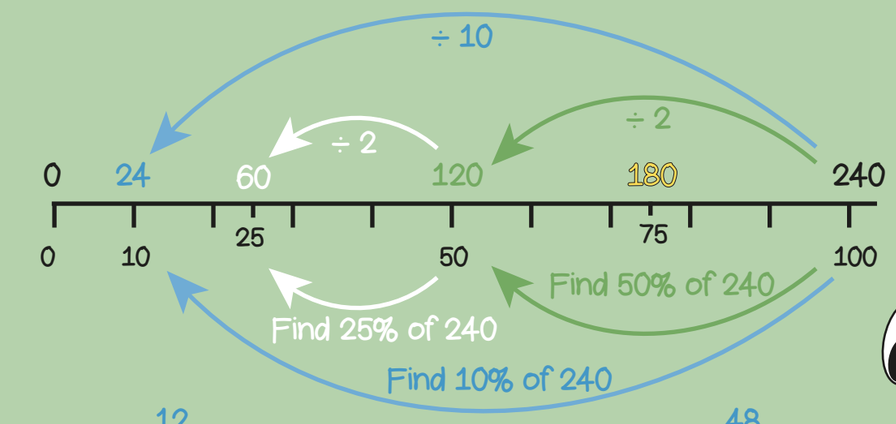


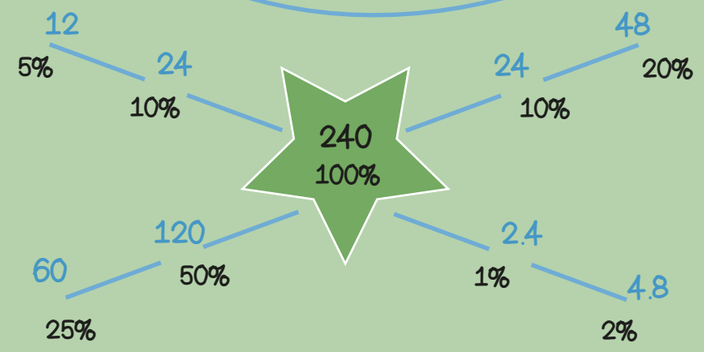
V = 12 x 5 x 4
= 12 x 20
= 240cm³

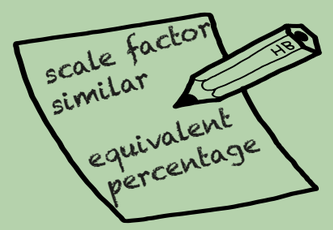




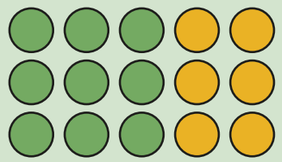
V = 4 x 4 x 4
= 16 x 4
= 64cm³







3 green for every 2 yellow

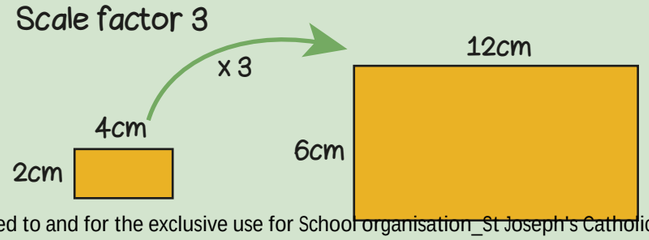


green	yellow	total
3	2	5
6	4	10
9	6	15

Colin and Coco share £60
Coco gets 3 x more than Colin.

so 1 part = 60 ÷ 4 = 15
So Colin gets £15
and Coco gets £15 x 3 = £45

Scale factor 3



Buying a mug costs £8 for the mug plus £4 per colour. How much would it cost to get a mug with 3 colours?
£8 + 4 x 3 = £20

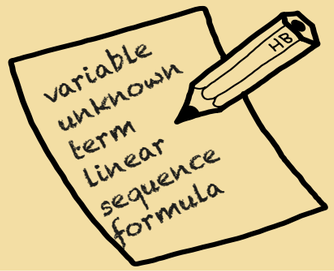
a + a = 2a
a x a = a²

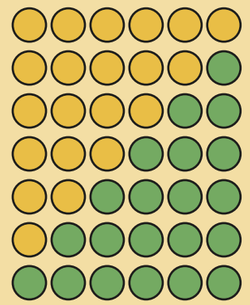
If a = 3
2a = 2 x 3 = 6
a² = 3 x 3 = 9

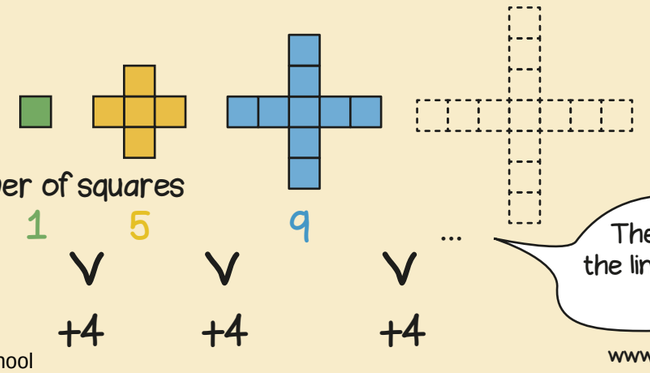
a + b = 6

If a = 0 then b = 6

a = 1	b = 5
a = 2	b = 4
a = 3	b = 3
a = 4	b = 2
a = 5	b = 1
a = 6	b = 0







The next term in the linear sequence is 9 + 4 = 13