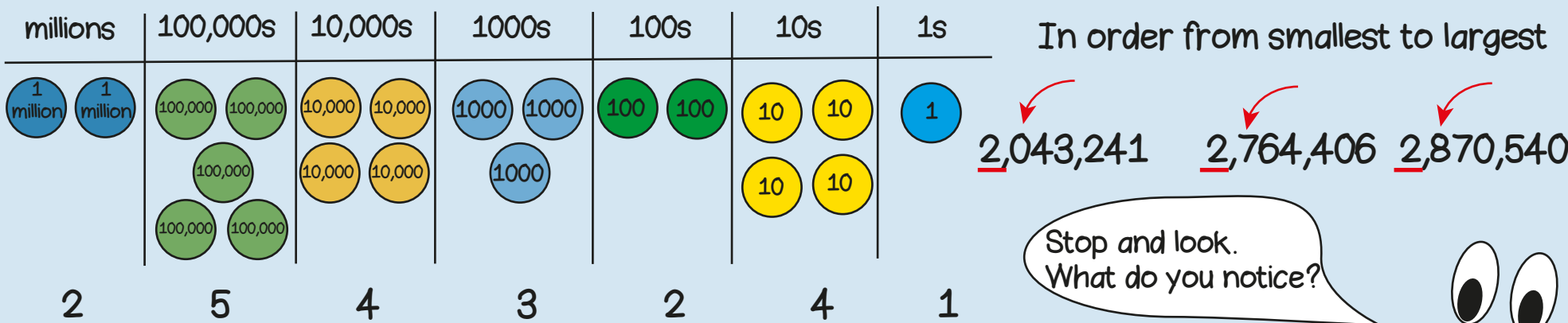


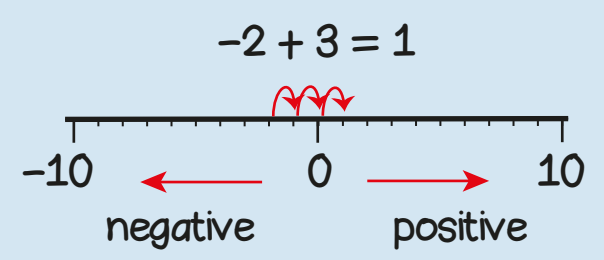


In order from smallest to largest

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



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

Round to the nearest million.



Multiplying and dividing by 10, 100 and 1000

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			

Ten times greater

Ten times smaller

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...

$0.8 \times 7 = 8 \times 7 \div 10$
 $4.2 \times 5 = 42 \div 2$
 $56,000 \div 80 = 700$

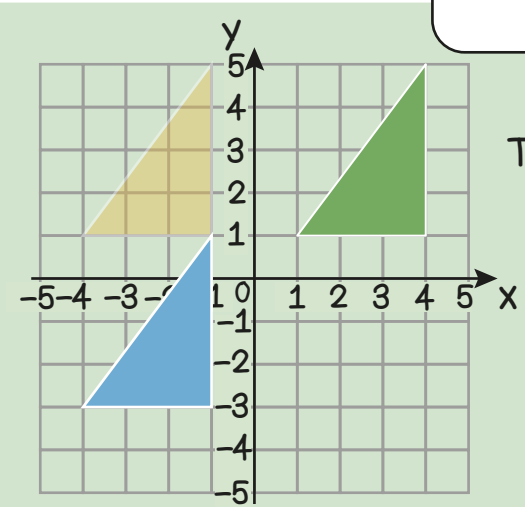
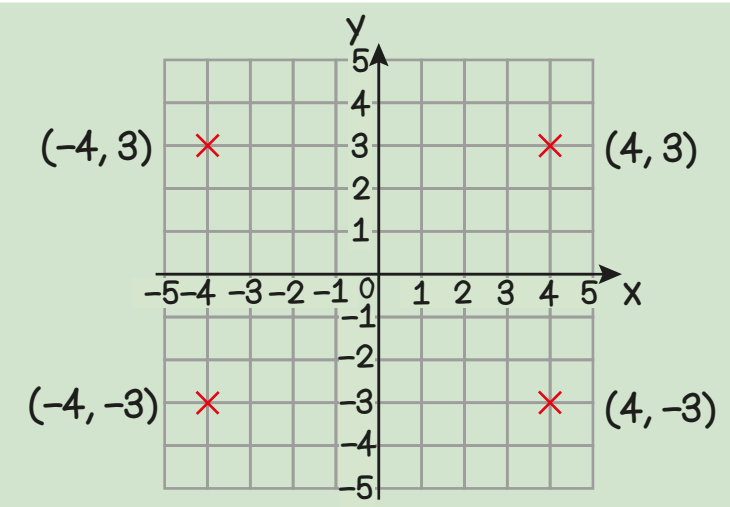
2427
x 38
19416
72810
92226

0139r3
24 | 3339
0139.125
24 | 3339.000

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

$3339 \div 24 = 139 \text{ r}3 = 139\frac{3}{24}$
 $= 139.13 \text{ (to 2dp)}$

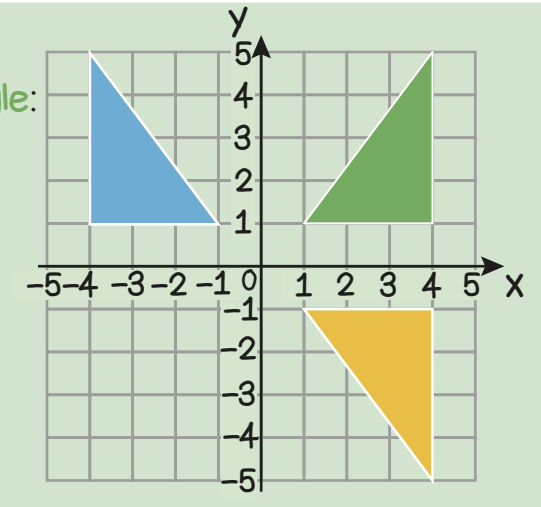
Year 6 Term 1



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

$$\frac{7}{14} = \frac{1}{2}$$

$\div 7$

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

$\frac{9}{12}$

$\frac{8}{12}$

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

Order

$\frac{5}{6}$ more than $1\frac{1}{2}$

$\frac{2}{5}$ less than $1\frac{1}{2}$

$\frac{8}{7}$ more than 1

$1\frac{3}{4}$ more than $1\frac{1}{2}$

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...

$0.75 = \frac{3}{4}$

$0.5 = \frac{1}{2}$

$0.33... = \frac{1}{3}$

$0.25 = \frac{1}{4}$

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

$0.1 = \frac{1}{10}$

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

75%

50%

33.33...%

25%

20%

10%

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

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

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

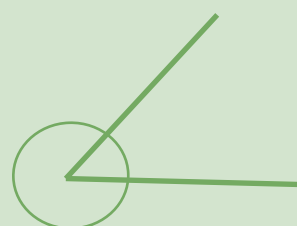
$\frac{1}{8} = 0.125$

simplify equivalent proper improper percent

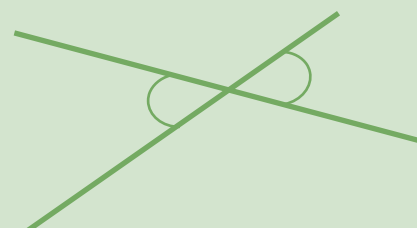
Year 6 Term 2



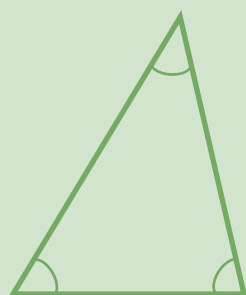
The sum of the angles at a point on a straight line is 180°



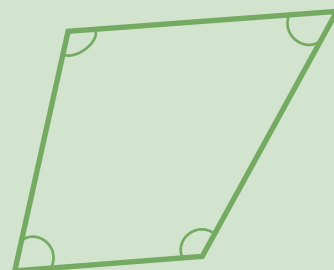
The sum of the angles at a point is 360°



Vertically opposite angles are equal



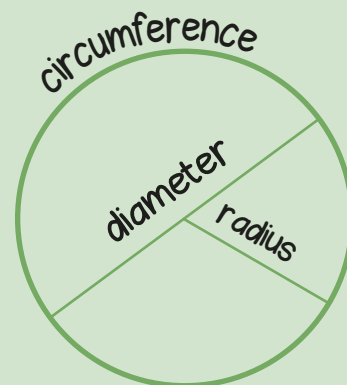
The sum of the angles in a triangle is 180°



The sum of the angles in a quadrilateral is 360°

vertically opposite
radius
diameter
circumference

Parts of circle



quadrilaterals

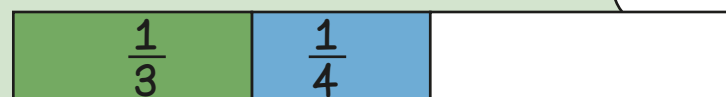
at least 2 lines of symmetry

	curved surface	no curved surface
prism		
not a prism		

properties
symmetry
parallel
prism
pyramid

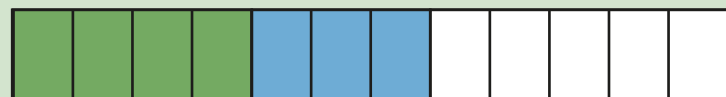
$$\frac{1}{3} + \frac{1}{4}$$

I can't describe the sum!.



$$\frac{1}{3} = \frac{4}{12} \quad \frac{1}{4} = \frac{3}{12}$$

Find a common denominator.



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

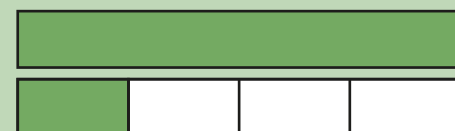
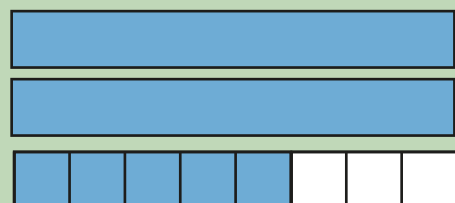
I can add fractions with the same denominator.

so

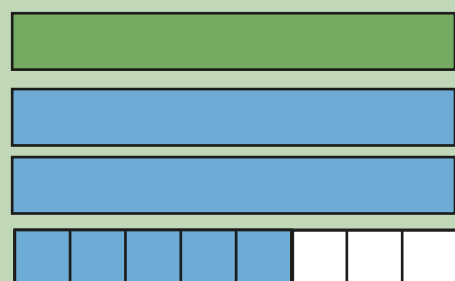
$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

Adding mixed numbers.

$$2\frac{5}{8} + 1\frac{1}{4}$$

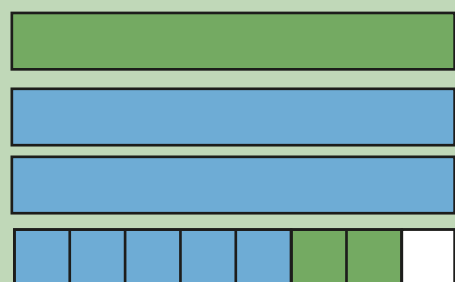
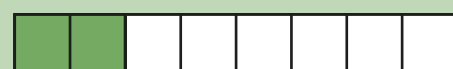


Add the whole numbers.



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!.



$$\frac{3}{4} = \frac{9}{12} \quad \frac{2}{3} = \frac{8}{12}$$

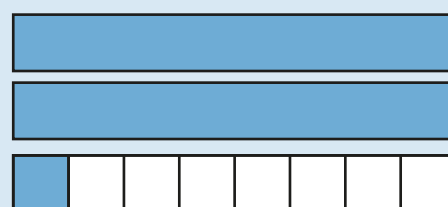
Find a common denominator.



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

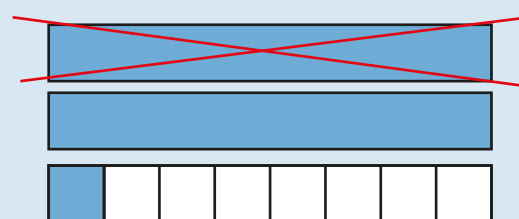
I can subtract fractions with the same denominator.

Subtracting mixed numbers.



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

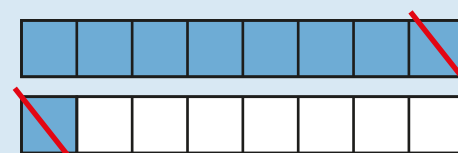
Subtract the whole numbers.



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

Subtract the fraction by finding a common denominator.

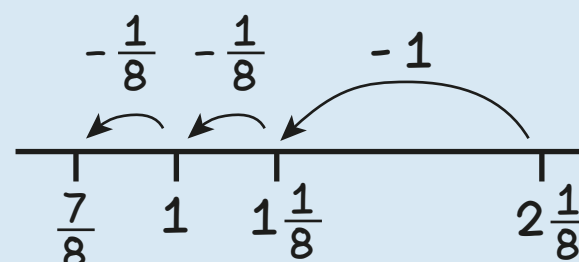
$$\frac{1}{4} = \frac{2}{8}$$



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

$$= \frac{7}{8}$$

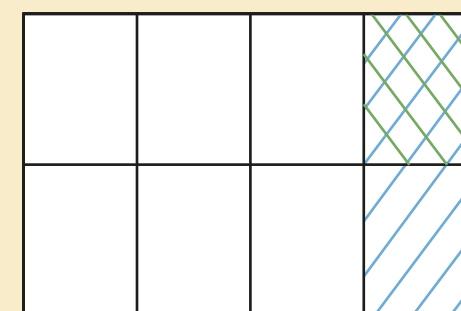
Or on a number line.



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

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

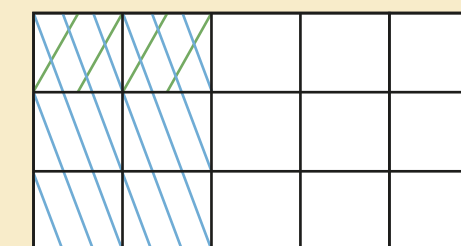
$$\frac{1}{4} \div 2 = \frac{1}{8}$$



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

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

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

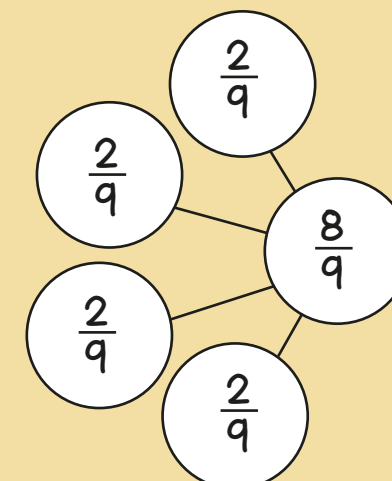
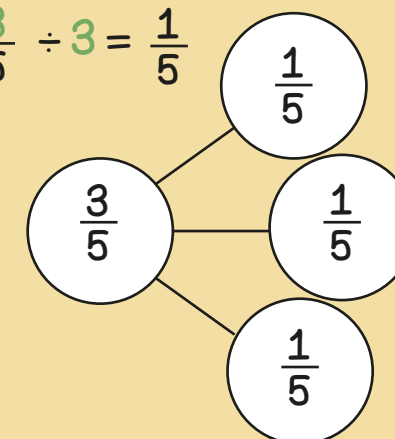


Year 6 Term 3



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

denominator
numerator
proper
improper
equivalent



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

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

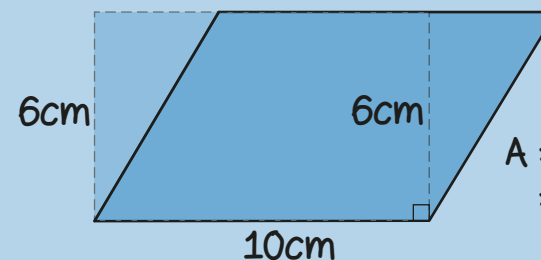
Ten times smaller

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

13.6×10
move digits 1 place left
 13.6×1000
move digits 3 places left

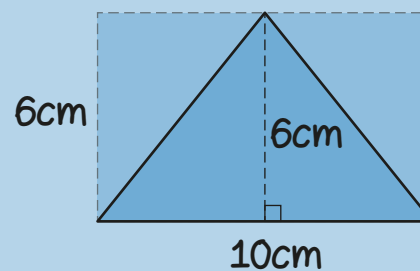
$13.6 \div 10$
move digits 1 place right
 $13.6 \div 100$
move digits 2 places right

Area of a parallelogram
= base x perpendicular height



$$A = 10 \times 6 = 60\text{cm}^2$$

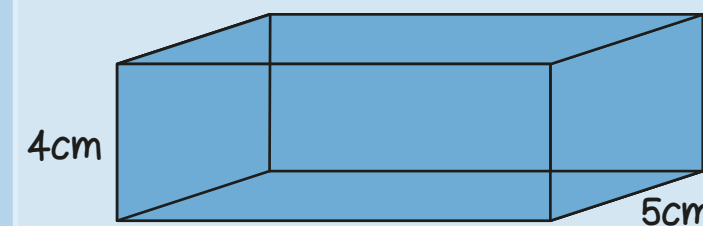
Area of a triangle
= $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$



$$A = \frac{1}{2} \times 10 \times 6 = 30\text{cm}^2$$

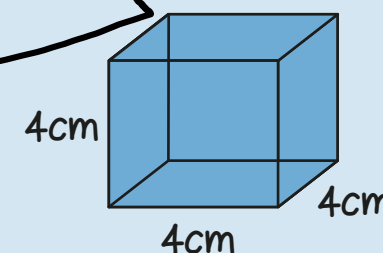
$$A = 10 \times 6 \div 2 = 30\text{cm}^2$$

Volume of a cuboid = length x width x height



$$V = 12 \times 5 \times 4 = 12 \times 20 = 240\text{cm}^3$$

convert perpendicular area squared volume cubed



$$V = 4 \times 4 \times 4 = 16 \times 4 = 64\text{cm}^3$$

1m = 100 cm
 $13.6 \times 100 = 1360$
so 13.6m = 1360cm

1km = 1000 m
 $13.6 \times 1000 = 13600$
so 13.6km = 13,600m

1l = 1000 ml
 $13600 \div 1000 = 13.6$
so 13,600ml = 13.6litres

1kg = 1000 g
 $1360 \div 1000 = 1.36$
so 1360g = 1.36kg

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

1cm = 10 mm
 $13.6 \times 10 = 136$
so 13.6cm = 136mm

Year 6 Term 4



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

$$a + a = 2a$$

$$a \times a = a^2$$

If $a = 3$

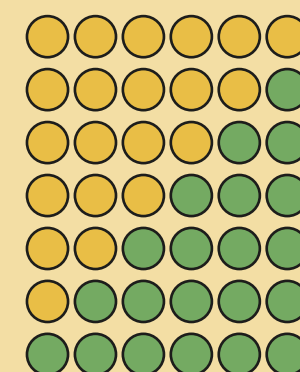
$$2a = 2 \times 3 = 6$$

$$a^2 = 3 \times 3 = 9$$

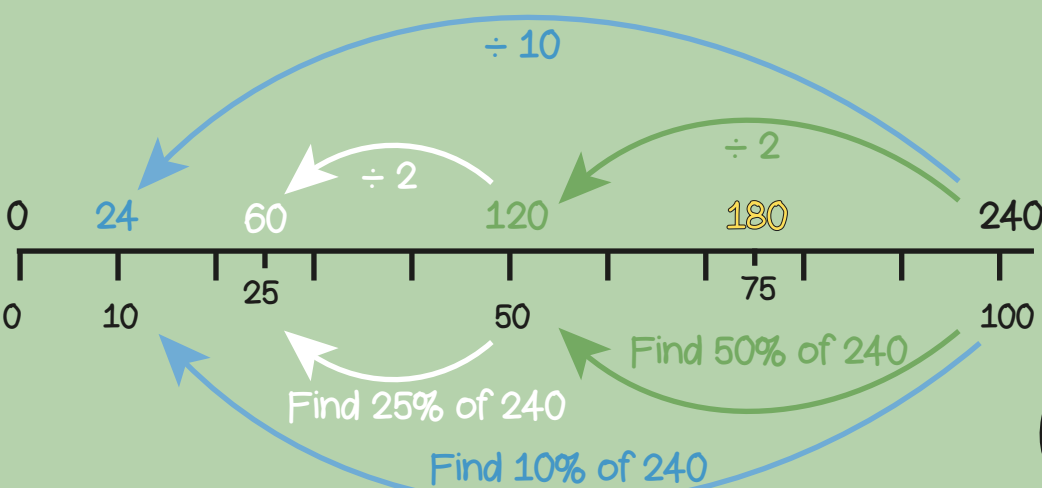
$$a + b = 6$$

If $a = 0$ then $b = 6$

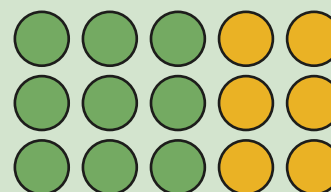
$a = 1$	$b = 5$
$a = 2$	$b = 4$
$a = 3$	$b = 3$
$a = 4$	$b = 2$
$a = 5$	$b = 1$
$a = 6$	$b = 0$



variable unknown term linear sequence formula



3 green for every 2 yellow



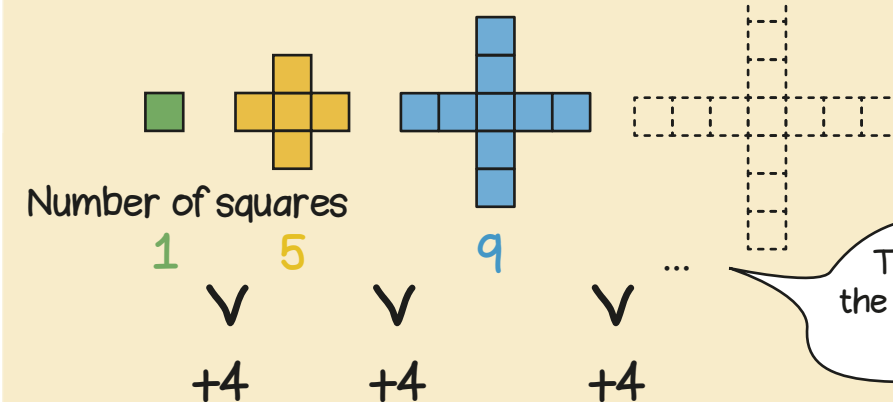
green	yellow	total
3	2	5
6	4	10
9	6	15

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



so 1 part = $60 \div 4 = 15$
So Colin gets £15
and Coco gets $\pounds 15 \times 3 = \pounds 45$

Scale factor 3



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

scale factor similar
equivalent percentage

