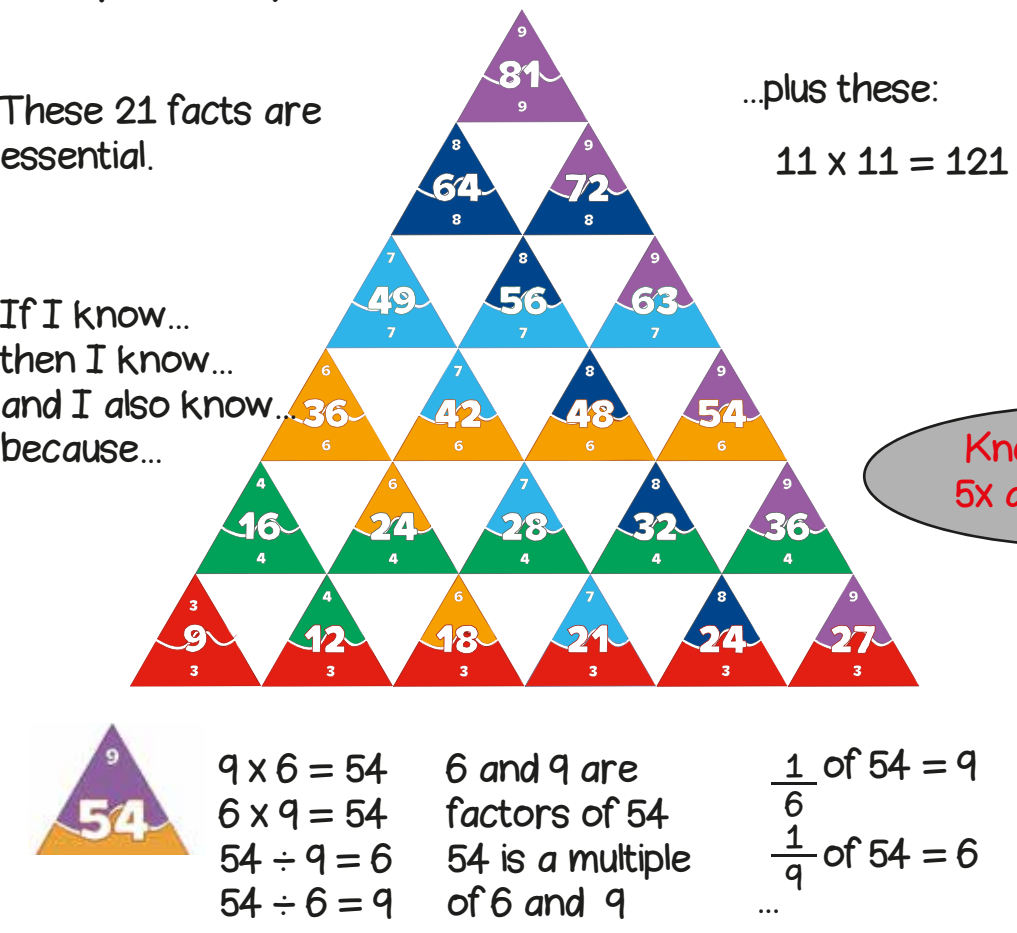


Multiplication, division and related facts

These 21 facts are essential.

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



...plus these:
11 x 11 = 121

- 12 x 3 = 36
- 12 x 4 = 48
- 12 x 6 = 72
- 12 x 7 = 84
- 12 x 8 = 96
- 12 x 9 = 108
- 12 x 11 = 132
- 12 x 12 = 144

Know your 2x, 5x and 10x facts

- 60 x 9 = 540
- 90 x 60 = 5400
- 0.9 x 6 = 5.4
- 0.9 x 0.6 = 0.54
- 540 ÷ 6 = 90
- 5400 ÷ 90 = 60
- 5.4 ÷ 9 = 0.6
- 54 ÷ 0.9 = 60 ...

Calculation methods

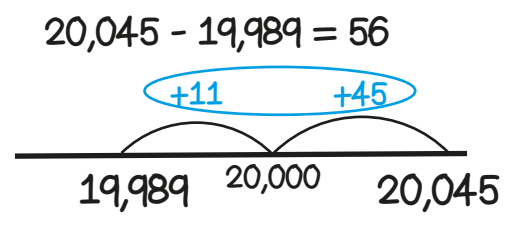
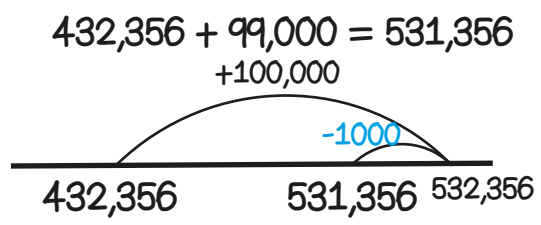
25,748
+ 46,374

72,122
1 1 1 1

Just know it, with jottings or formal written method?

45,748
- 26,374

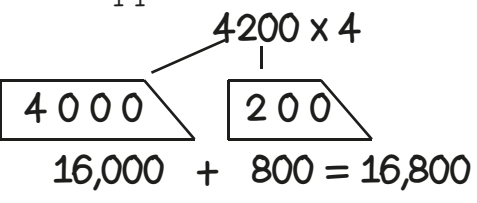
19,374



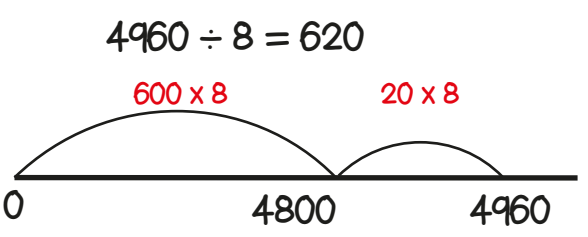
2427
x 38

19416
72810

92226



1431
4 5 7 2 4



342
21 7 1 8 2
63
88
84
42
42

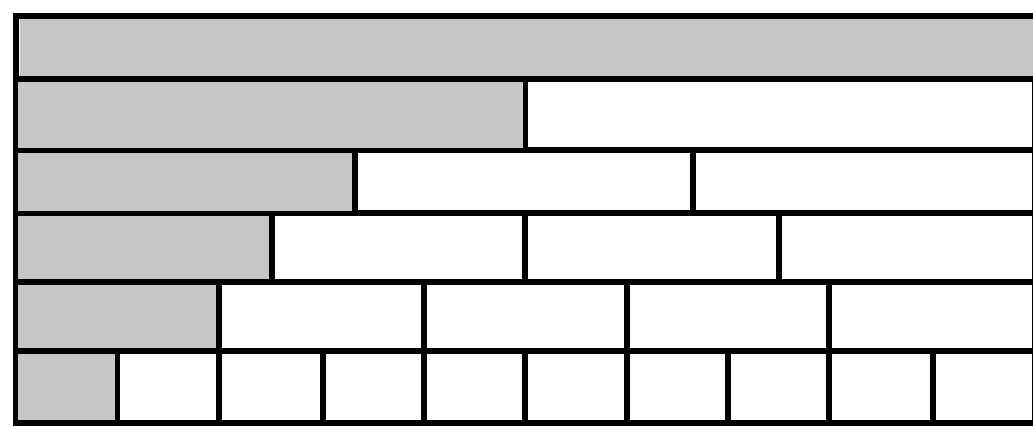
0

Need to Know



Fractions, decimals and percentages

- 1 = 1
- 0.5 = 1/2
- 0.33... = 1/3
- 0.25 = 1/4
- 0.2 = 1/5
- 0.1 = 1/10



So 0.3 = 30% = 3/10

Multiplying and dividing by 10, 100 and 1000

M	HTh	TTh	Th	100s	10s	1s	1/10	1/100	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

1kg = 1000g
1km = 1000m
1l = 1000ml

1m = 100cm
1cm = 10mm

To find 10% of an amount divide by 10
To find 1% of an amount divide by 100

Types of numbers

Prime numbers: exactly two factors:
2, 3, 5, 7, 11, 13, 17, 19
1 is not prime

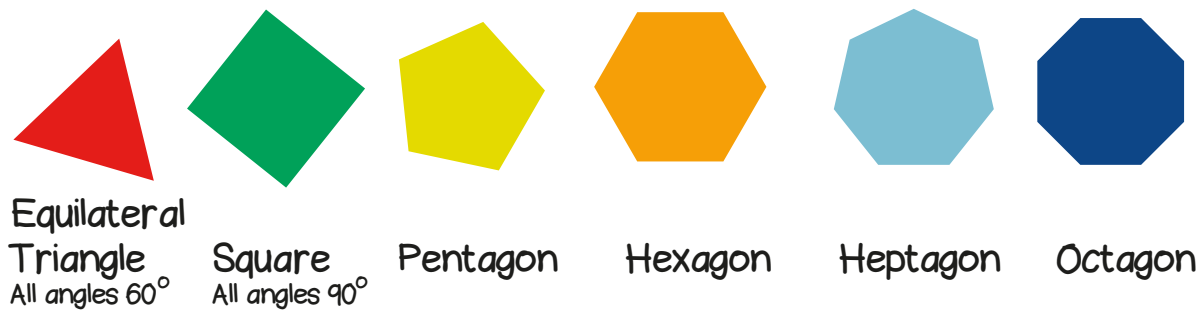
Factors: divide exactly into a number
Factors of 12 are 1, 2, 3, 4, 6, 12

Square numbers: the result of multiplying a number by itself. 1, 4, 9, 16, 25, 36

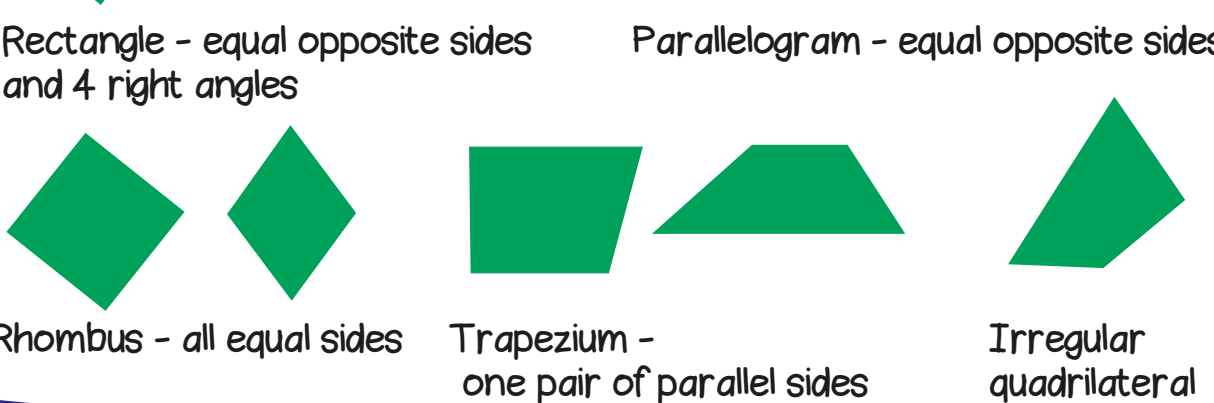
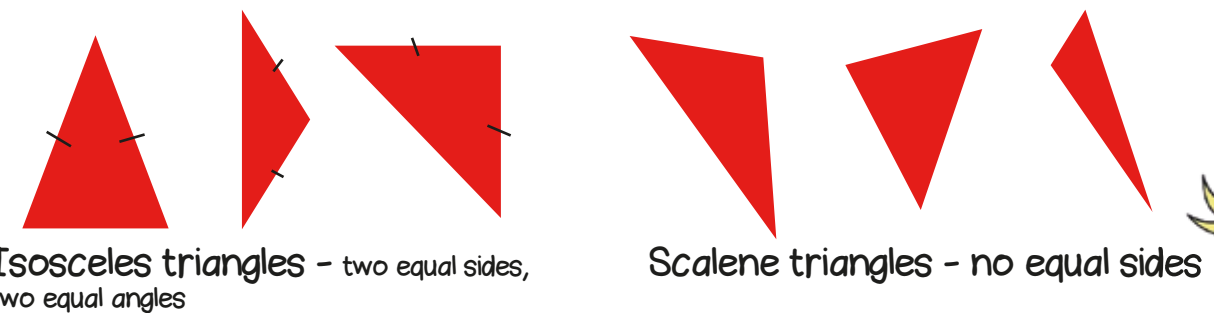
Multiples: the result of multiplying
Multiples of 6 are 6, 12, 18, 24 ...



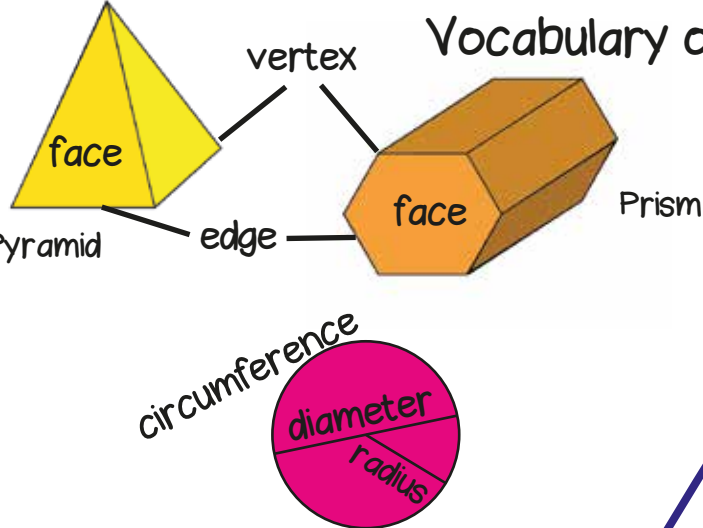
Regular Polygons - all sides and angles equal



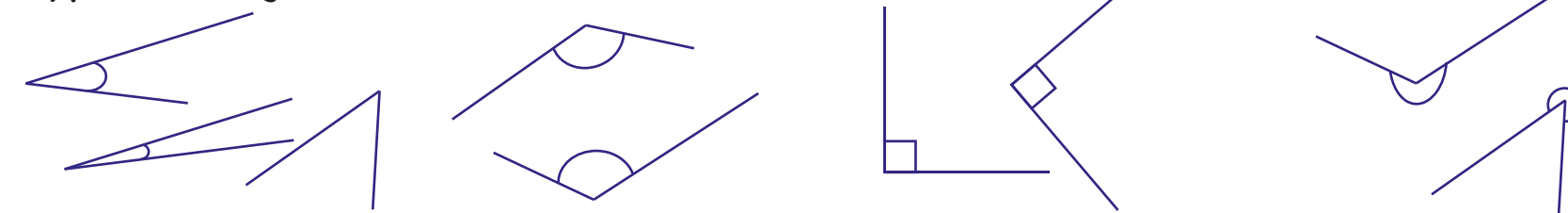
Irregular Polygons



Vocabulary of shapes



Types of angles



Acute angles
less than 90°

Obtuse angles
more than 90°
less than 180°

Right angles 90°

Reflex angles
more than 180°

Angle facts

Angles on a straight line total 180°

Angles in a complete turn total 360°

Vertically opposite angles are equal

Need to Know

Angles of a triangle total 180°

Angles of a quadrilateral total 360°

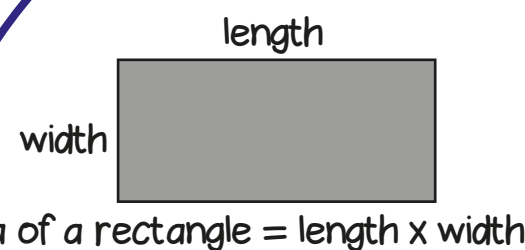
Angles of a pentagon total 540°

+ 180°

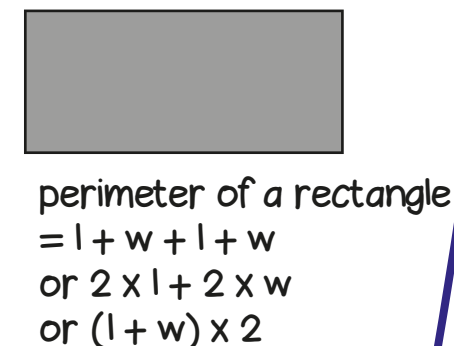
+ 180°

+ 180°

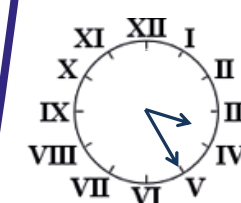
Area



Perimeter



Time



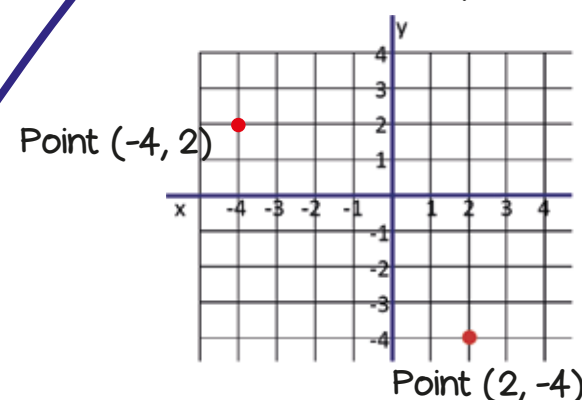
Twenty five past three
or 3:25a.m. or 03:25
or 3:25pm or 15:25

January - 31 days
February - 28 or 29 days
March - 31 days
April - 30 days
May - 31 days
June - 30 days
July - 31 days
August - 31 days
September - 30 days
October - 31 days
November - 30 days
December - 31 days

1 year = 365 days
1 year = 52 weeks
1 week = 7 days
1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

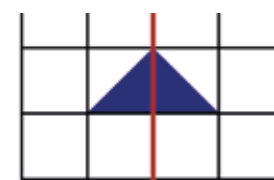
Co-ordinates of points

Across then up or down



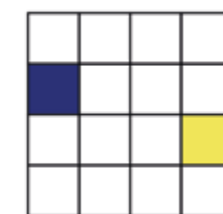
Reflection

Reflect triangle in mirror line



Translation

Translate blue to yellow



3 squares right
1 square down