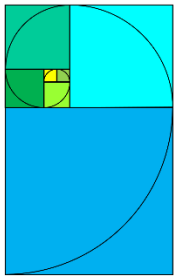
Maths – 7 Higher: Autumn 1

1 Algebra - Sequences



Here are the first five terms of a number sequence.

3 8 13 18 23

(a) Write down the next **two** terms of the sequence. 28 33

(b) Explain how you found your answer. +5

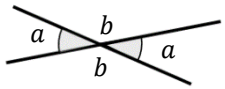
(c) Find an expression, in terms of n, for the nth term of the sequence. $5n - 2$

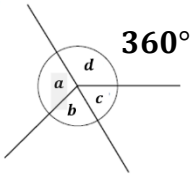
(d) Write down the 21st term of the number sequence. $5 \times 21 - 2 = 103$

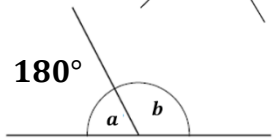
(e) In the space below, draw Pattern number 4.

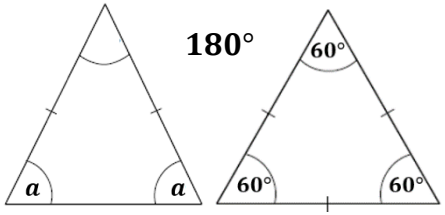
2 Shape - Angles

Opposite: equal

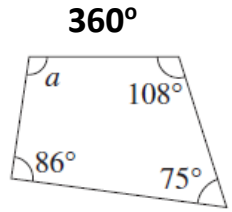








isosceles equilateral



3 Algebra – Rules of Algebra

Simplify

(a) $c + c + c + c = 4c$

(b) $3g + 5g = 8g$

(c) $2a + 7b - 3b + a = -a + 8b$

Substitution into formula:

$v = u + 10t$

Work out the value of v when

$u = 10$ and $t = 7$ $v = 10 + 10 \times 7 = 80$

Rules:

$a + b = b + a$

$a \times b = b \times a = ab$

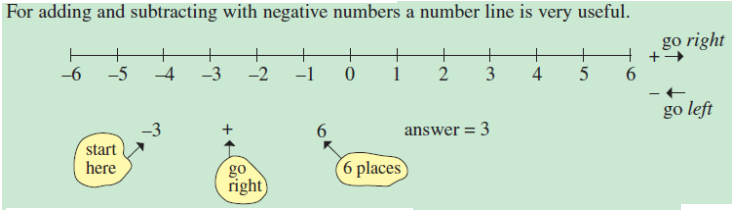
$a \div b = \frac{a}{b}$

$a \times a = a^2$

4 Number – Negative Numbers

Adding and subtracting

For adding and subtracting with negative numbers a number line is very useful.



Multiplying and dividing

When a positive number is multiplied by a negative number the answer is negative.

When two negative numbers are multiplied together the answer is positive.

The rules for dividing are the same as those for multiplying

hegartymaths

1	2	3	4
196 - 198	461, 477 - 479, 485 - 487, 560, 81 2 -814	156 – 157, 780 - 782	40 - 44