M7 =11 days to go!

16 8 4 2 1
1 1 0 1

10 (a) Write the binary number 1101 as a decimal number. 8+4+1

Answer 13 [1]

(b) Write the decimal number 31 as a binary number.

32 16 8 4 2 1
0 1 1 1 1 1

Answer 11111 [1]

31 = 16+8+4+2+1

9 Mark writes out the terms of the sequence with n th term rule $3n + 5$

Sean writes out the terms of the sequence with n th term rule $5n - 3$

Which term number has the same value for both sequences?

3n+5 gives 8, 11, 14, 17, 20, 23, 26, 29, 32

5n-3 gives 2, 7, 12, 17, 22, 27, 32

Answer 32 [4]

or solve $3n+5 = 5n-3$

$5+3 = 5n-3n$

$8 = 2n$

Write as a fraction.

5^{-3}

$5^{-3} = \frac{1}{5^3} = \frac{1}{125}$

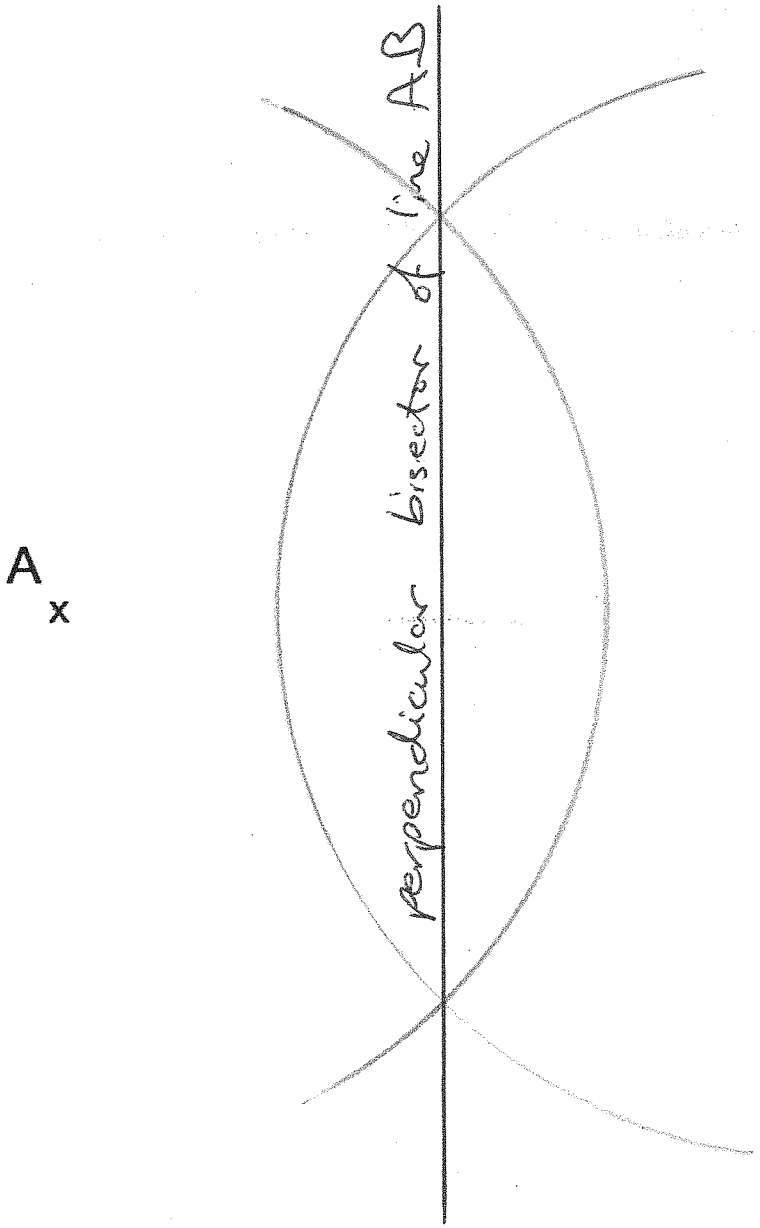
$\frac{1}{125}$

(1)

Negative indices are on M7

Fractional indices are on M8

Draw the locus of all points which are equidistant from points A and B.



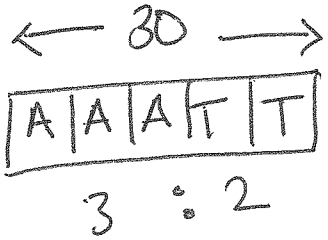
Draw 2 arcs both the same distance/radius

(2)

Alex and Thomas share 30 sweets.
They divide them in the ratio 3:2.

Draw the blocks

How many sweets does Thomas have?



30 ÷ 5 = 6

Each block = 6

Thomas has 12

.....

(2)