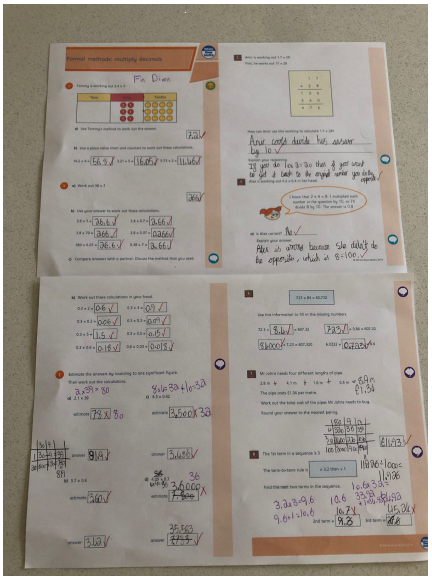
Positive Examples of Engagement in Maths with Online tools:

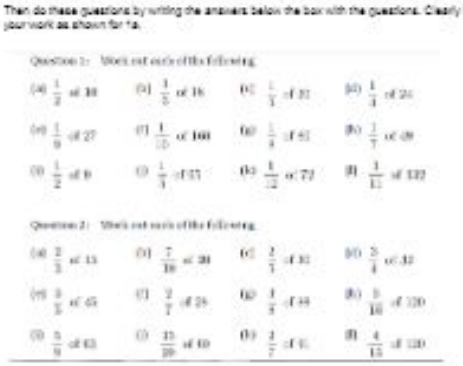
It is the start of our home learning journey in Maths and students are uploading their work straight from their exercise books onto their google classroom. Students are also working through tasks on Accelerated Maths, MyMaths and Maths Watch. The google classroom is updated by their Maths Teacher and so far students have engaged really well. Keep going and keep in touch with your Maths Teacher via the google classroom. (from Mrs Tatham)

Year 7

Fin Dixon: Excellent work from Fin - following the hand in instructions perfectly and then responding to my message asking him to add his working out which he has done in purple pen before resubmitting- well done Fin.



Erin Van Tonder: engaging well and feedback supplied



Your work

1a) ½ of 10=5
1b) ⅓ of 18=6
1c) ¼ of 20 =4
1d)¼ of 24=6 of 20=4
1e)1/9 of 27=3
1f)1/10 of 160=16
1g)½of 80=10

2a)⅝ of 15=10
2b)7/10 of 20=14
2c)⅝ of 30=12
2d)¾ of 32=24
2e)⅝ of 45=27
2f)2/7 of 28=8
2g)¾ of 88=33

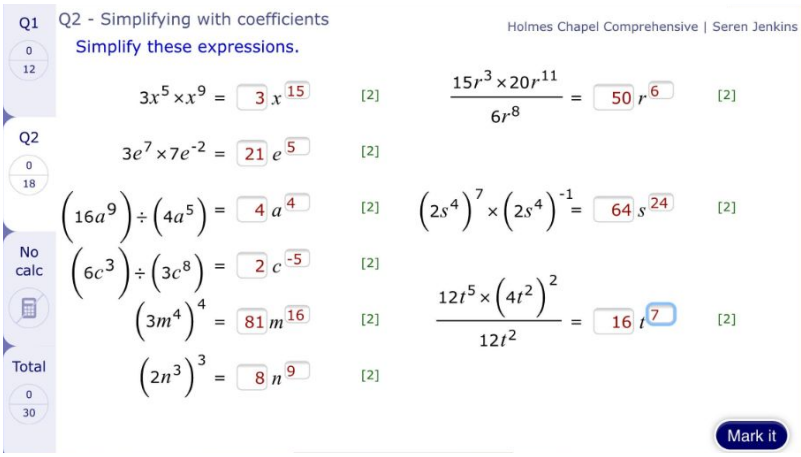
1h)1/7 of 49=7
1i)½ of 9=4.5
1j)¾ of 65=12 x
1k) 1/12 of 72=7 x
1l)1/11 of 132=

2h)3/10 of 120=36
2i)5/9 of 63=35
2j)13/20 of 60=52 x
2k)2/7 of 91=26
2l)4/15 of 120=32

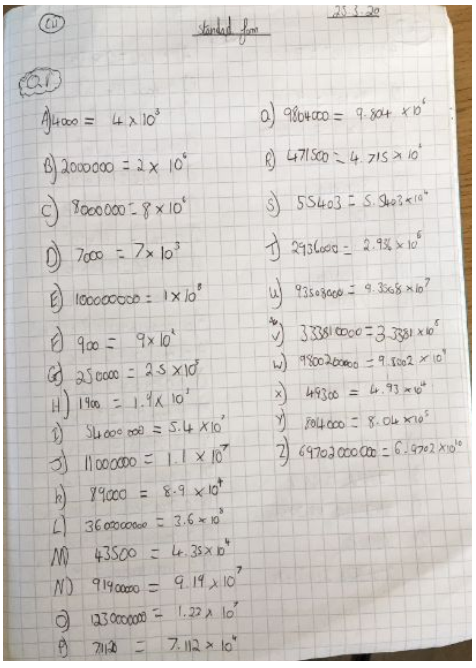
Www you can find fractions of an amount like ¼ and ¾
Ebi check work and try each question e.g 1j check by doing your answer x 5 =
Action try 1l hint do short division by the side to help you, check and correct 1j, k and 2j

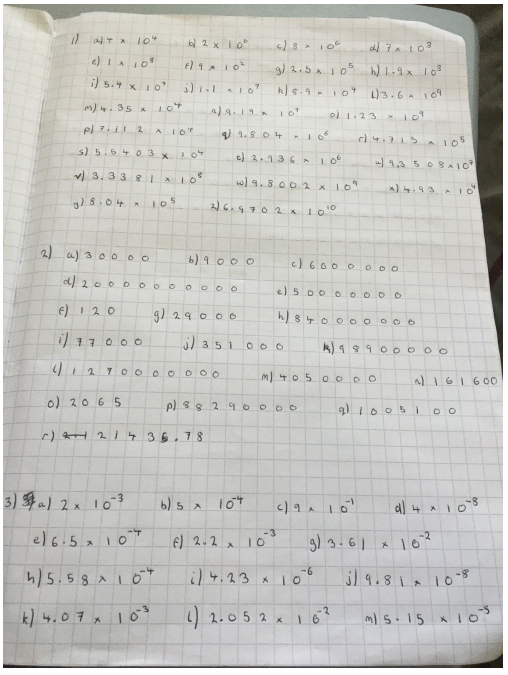
Year 8

Seren Jenkins: Going above and beyond - completing extra tasks and emailing screenshots when MyMaths was encountering some glitches when marking work.
(Thank you to all the other students who also did this - of which there were many!)



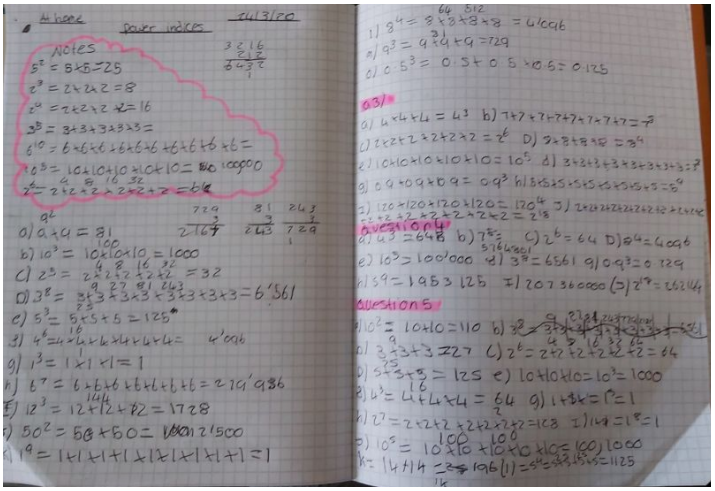
James Ball and Aadi Menon: Brilliant work Converting Standard Form

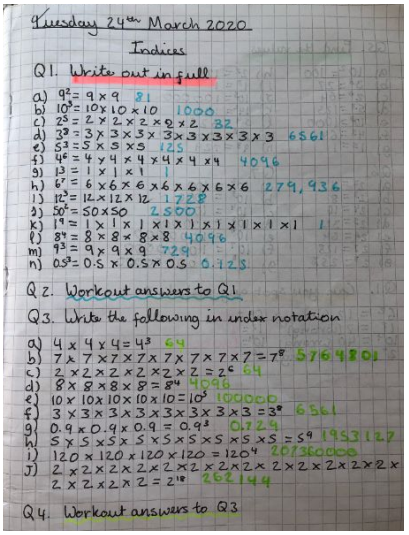




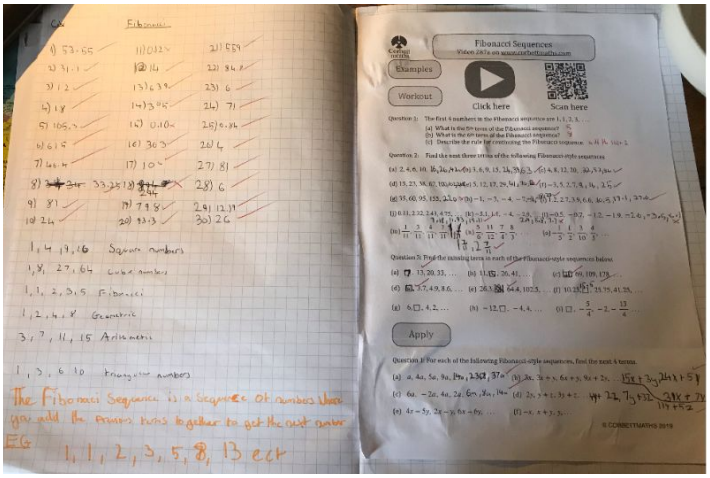
Year 9

Poppy Kyneston-Perez and Daisy Walker: Fantastic thorough work investigating numerical indices



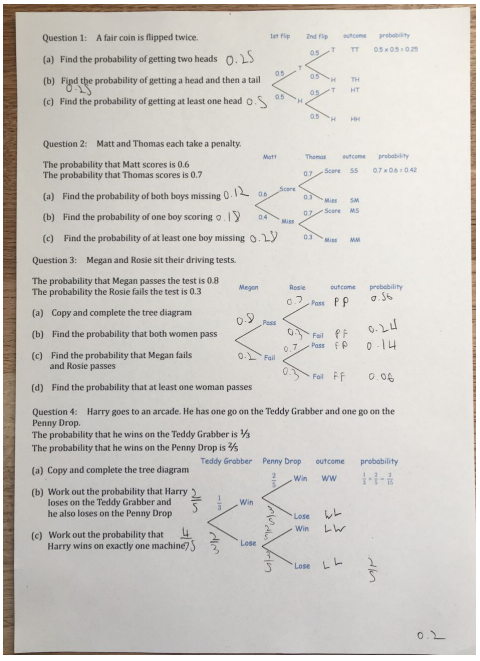


Zac Perry: Brilliant independent work looking into Fibonacci Sequences and testing his understanding



Year 10

Herbie Bonner-Booth completing work on frequency trees.



Question 1: A fair coin is flipped twice.

(a) Find the probability of getting two heads 0.25

(b) Find the probability of getting a head and then a tail 0.25

(c) Find the probability of getting at least one head 0.5

1st flip	2nd flip	outcome	probability
0.5 T	0.5 T	TT	0.5 × 0.5 = 0.25
	0.5 H	TH	
0.5 H	0.5 T	HT	
	0.5 H	HH	

Question 2: Matt and Thomas each take a penalty.

The probability that Matt scores is 0.6
The probability that Thomas scores is 0.7

(a) Find the probability of both boys missing 0.12

(b) Find the probability of one boy scoring 0.18

(c) Find the probability of at least one boy missing 0.28

Matt	Thomas	outcome	probability
0.6 Score	0.7 Score	SS	0.7 × 0.6 = 0.42
	0.3 Miss	SM	
0.4 Miss	0.7 Score	MS	
	0.3 Miss	MM	

Question 3: Megan and Rosie sit their driving tests.

The probability that Megan passes the test is 0.8
The probability the Rosie fails the test is 0.3

(a) Copy and complete the tree diagram

(b) Find the probability that both women pass

(c) Find the probability that Megan fails and Rosie passes

(d) Find the probability that at least one woman passes

Megan	Rosie	outcome	probability
0.8 Pass	0.7 Pass	PP	0.56
	0.3 Fail	PF	0.24
0.2 Fail	0.7 Pass	FP	0.14
	0.3 Fail	FF	0.06

Question 4: Harry goes to an arcade. He has one go on the Teddy Grabber and one go on the Penny Drop.
The probability that he wins on the Teddy Grabber is ⅓
The probability that he wins on the Penny Drop is ⅖

(a) Copy and complete the tree diagram

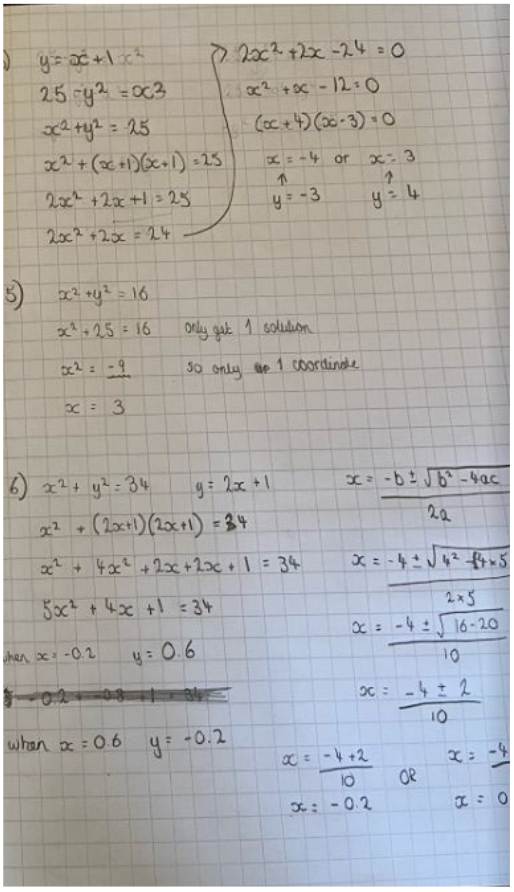
(b) Work out the probability that Harry loses on the Teddy Grabber and he also loses on the Penny Drop $\frac{2}{5}$

(c) Work out the probability that Harry wins on exactly one machine $\frac{4}{5}$

Teddy Grabber	Penny Drop	outcome	probability
$\frac{1}{3}$ Win	$\frac{2}{5}$ Win	WW	$\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$
	$\frac{3}{5}$ Lose	WL	
$\frac{2}{3}$ Lose	$\frac{2}{5}$ Win	LW	
	$\frac{3}{5}$ Lose	LL	$\frac{2}{5}$

0.2

Emily Bailey and Elisse Nasry: Quadratic Simultaneous Equations… tricky stuff!



$y = x + 1$

$25 - y^2 = x^3$

$x^2 + y^2 = 25$

$x^2 + (x+1)(x+1) = 25$

$2x^2 + 2x + 1 = 25$

$2x^2 + 2x = 24$

$2x^2 + 2x - 24 = 0$

$x^2 + x - 12 = 0$

$(x+4)(x-3) = 0$

$x = -4$ or $x = 3$

$y = -3$ $y = 4$

5) $x^2 + y^2 = 16$

$x^2 + 25 = 16$ only get 1 solution

$x^2 = -9$ so only 1 coordinate

$x = 3$

6) $x^2 + y^2 = 34$ $y = 2x + 1$

$x^2 + (2x+1)(2x+1) = 34$

$x^2 + 4x^2 + 2x + 2x + 1 = 34$

$5x^2 + 4x + 1 = 34$

when $x = -0.2$ $y = 0.6$

~~$-0.2 + -0.8 + 1 = 34$~~

when $x = 0.6$ $y = -0.2$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

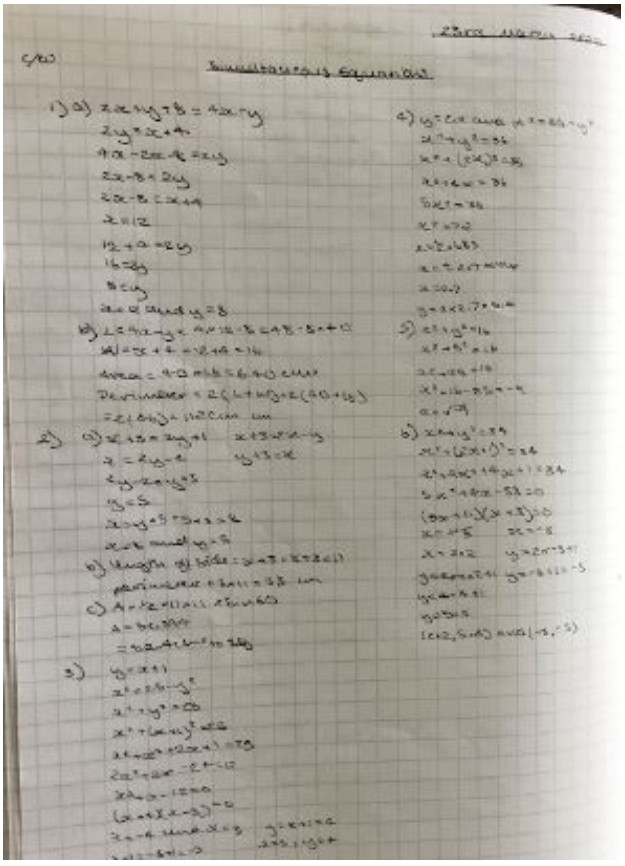
$x = \frac{-4 \pm \sqrt{4^2 - 4 \times 5}}{2 \times 5}$

$x = \frac{-4 \pm \sqrt{16 - 20}}{10}$

$x = \frac{-4 \pm 2}{10}$

$x = \frac{-4 + 2}{10}$ OR $x = -4$

$x = -0.2$ $x = 0$



Simultaneous Equations

1) a) $2x + y + 8 = 4x - y$

$2y = x + 4$

$4x - 2x - 8 = 2y$

$2x - 8 = 2y$

$2x - 8 = x + 4$

$x = 12$

$12 + 4 = 2y$

$16 = 2y$

$8 = y$

$x = 12$ and $y = 8$

b) $L = 4x - y = 4 \times 12 - 8 = 48 - 8 = 40$

$W = x + 4 = 12 + 4 = 16$

Area $= 40 \times 16 = 640$ cm²

Perimeter $= 2(L + W) = 2(40 + 16)$

$= 2(56) = 112$ cm

2) a) $x + 3 = 2y + 1$ $x + 3 = 2x - y$

$x = 2y - 2$ $y + 3 = x$

$2y - 2 = y + 3$

$y = 5$

$x = y + 3 = 5 + 3 = 8$

$x = 8$ and $y = 5$

b) Length of side $= x + 3 = 8 + 3 = 11$

perimeter $= 4 \times 11 = 33$ cm

c) $A = 12 \times 11 = 33 \times 60$

$A = 60 \times 33$

$= 60 \times 4 \times 6 = 1440$

3) $y = x + 1$

$x^2 + 25 = y^2$

$x^2 + y^2 = 25$

$x^2 + (x+1)^2 = 25$

$x^2 + x^2 + 2x + 1 = 25$

$2x^2 + 2x - 24 = 0$

$x^2 + x - 12 = 0$

$(x+4)(x-3) = 0$

$x = -4$ and $x = 3$ $y = x + 1 = 4$

$x = 3$, $y = 4$

4) $y = 2x$ and $x^2 + 25 = y^2$

$x^2 + y^2 = 36$

$x^2 + (2x)^2 = 36$

$x^2 + 4x^2 = 36$

$5x^2 = 36$

$x^2 = 7.2$

$x = 2.7$

$y = 2 \times 2.7 = 5.4$

5) $x^2 + y^2 = 16$

$x^2 + 5^2 = 16$

$x^2 + 25 = 16$

$x^2 = 16 - 25 = -9$

$x = \sqrt{-9}$

6) $x^2 + y^2 = 34$

$x^2 + (2x+1)^2 = 34$

$x^2 + 4x^2 + 4x + 1 = 34$

$5x^2 + 4x - 33 = 0$

$(5x + 11)(x + 3) = 0$

$x = -3$ $x = -3$

$x = 2 \times 2$ $y = 2 \times -3 + 1$

$y = 2 \times 2 + 1$ $y = -3 + 1 = -5$

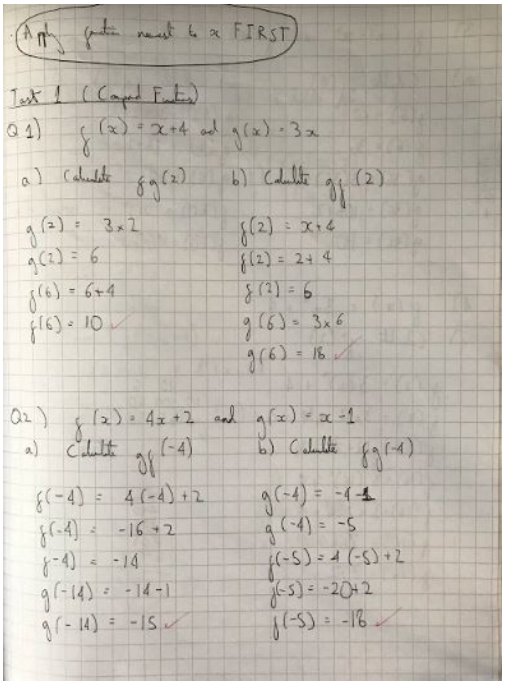
$y = 4 + 1$

$y = 5 + 1$

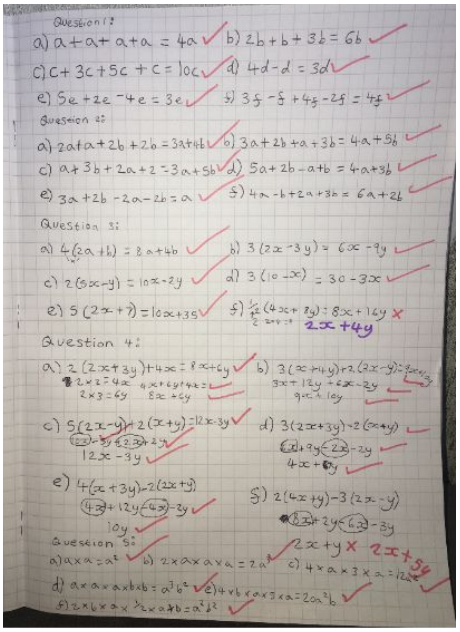
$(x = 2, 5 + 1) = (-3, -5)$

Year 11

Oliver Beardmore - still impressively engaged in maths!



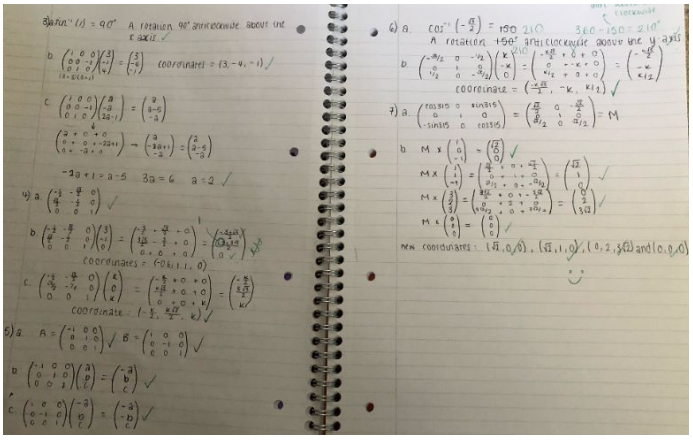
Georgia Whyte: Still working hard revising over key algebraic skills



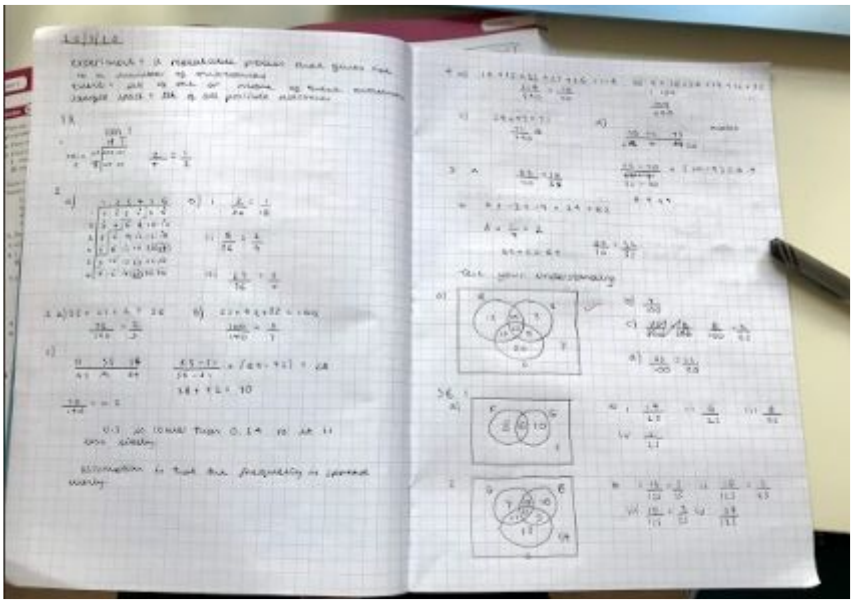
Year 12

Maisie Cummings: Fantastic work from one of our Further Mathematicians on Linear Transformations.

We're really pleased to see such a high level of engagement from our 6th formers so far. Keep it up!

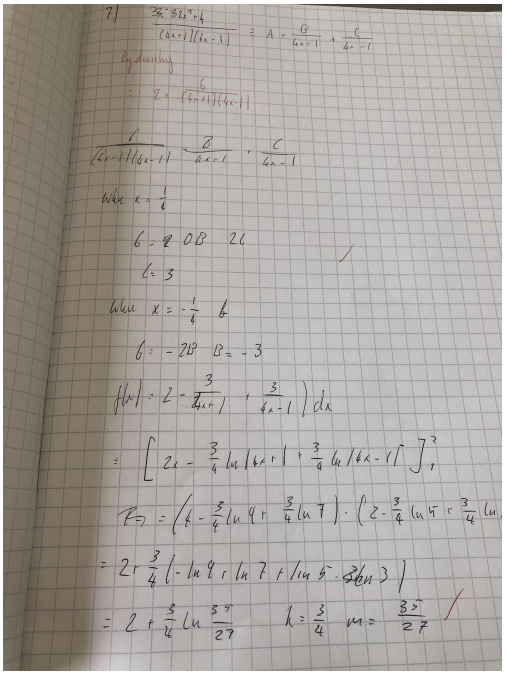


Katy Stone: Working on A-Level Probability

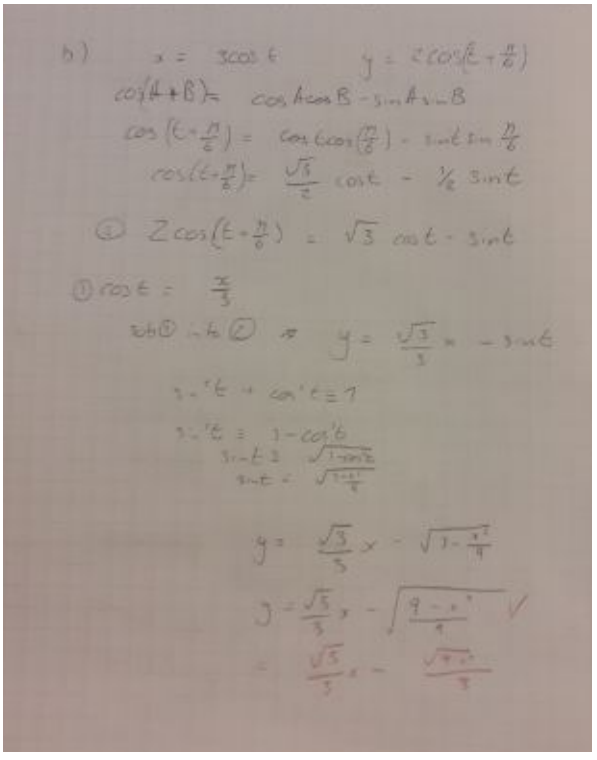


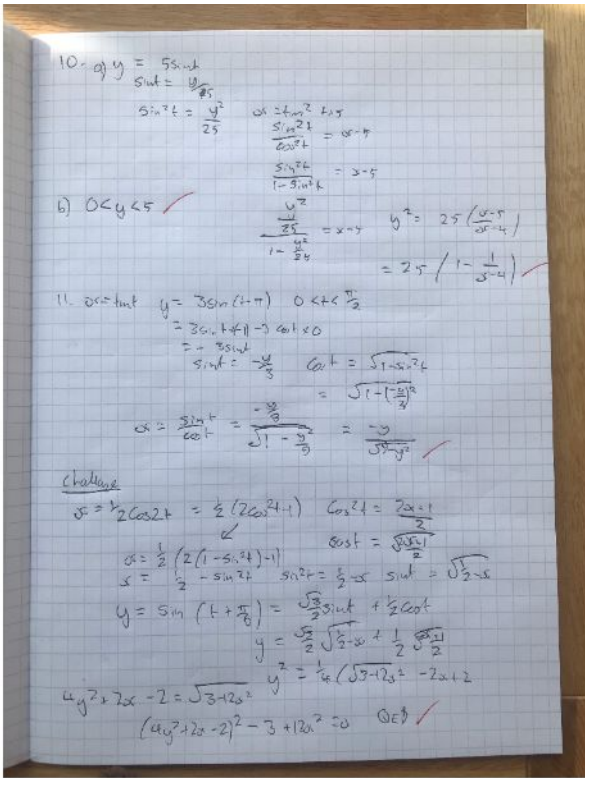
Year 13

Ralph Pickup: partial fractions, reviewing and improving his work

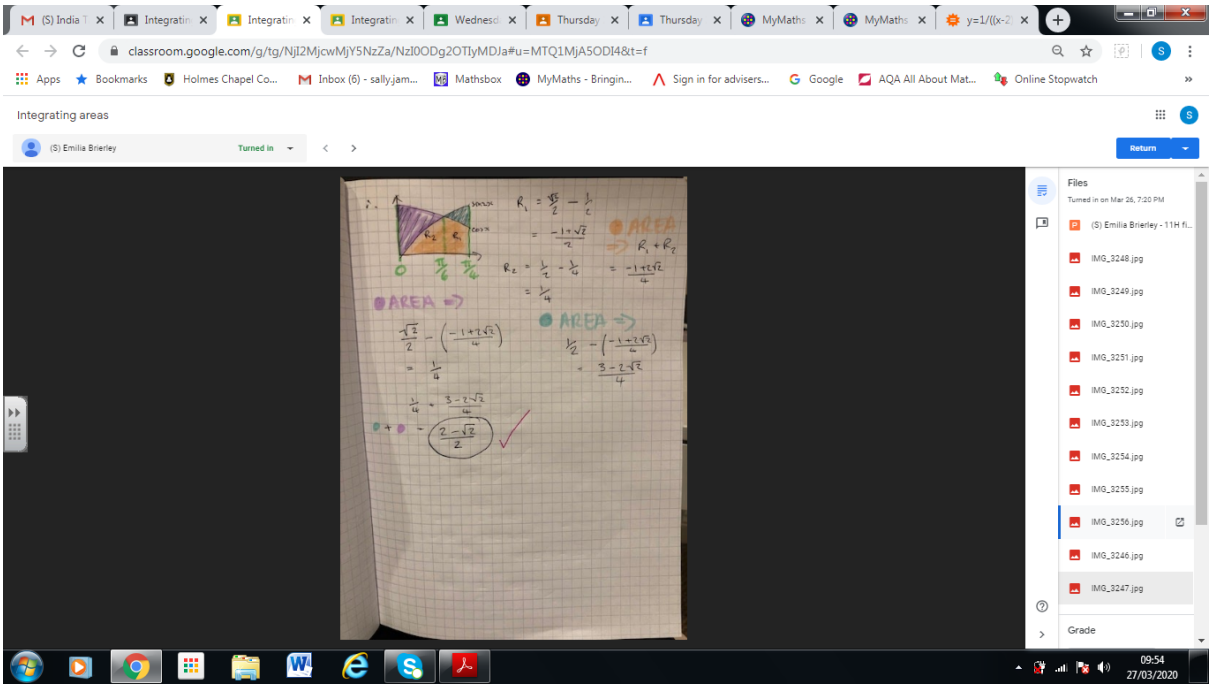


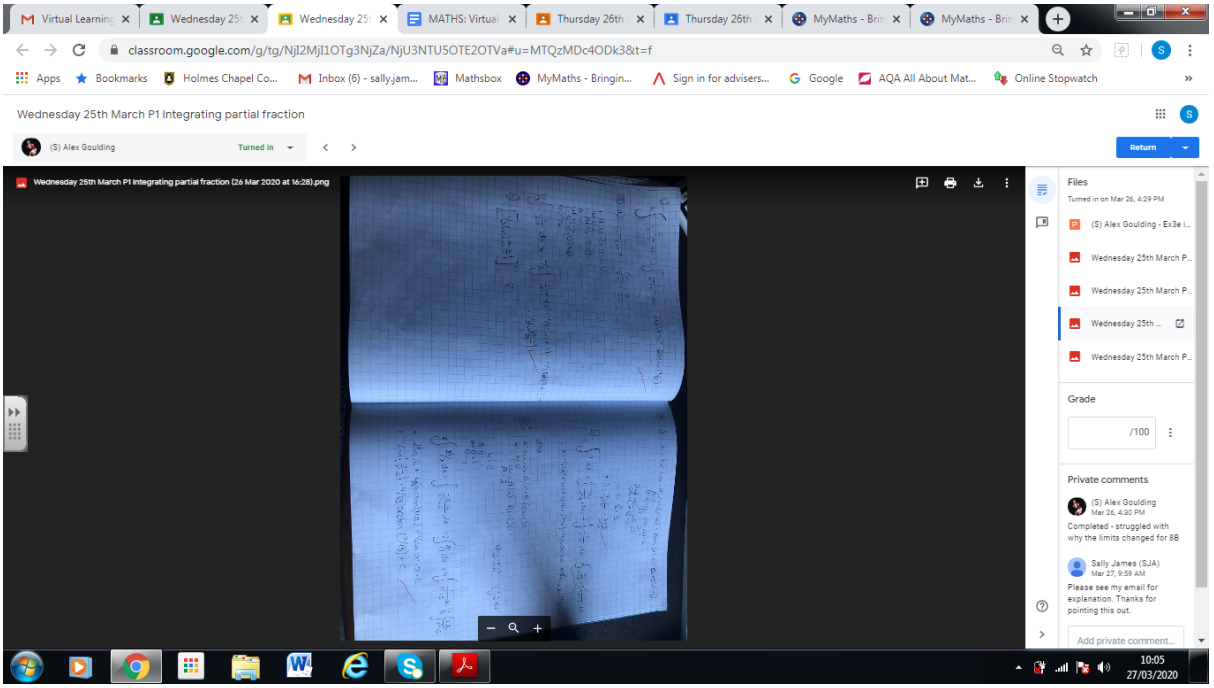
Josh Collins and Oscar Smith: Working on Parametric Equations





Excellent clear work from Emilia Brierley with clear details on how she can improve



Year 13FM

Excellent effort from Alex Goulding, messaging anything unclear about my posting comments in the private message box.