AQA A-level Computer Science Paper 2 Unofficial Mark Scheme 18th June 2024

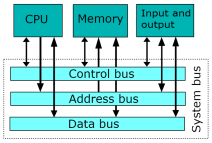
Unofficial Mark Schemes

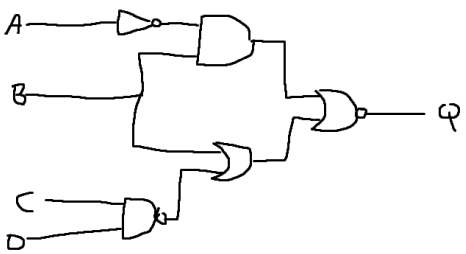
STEM 2024 A-Level discord: https://discord.gg/CEWK33JUth

Marks add up to 100

Num	Question	Answer	Discussion	Mark
1	**Topic: Anti-virus**			**Total: 4**
1.1	4 things to protect against viruses other than educating workers and an antivirus	Firewall: Control network traffic Packet filtering: Manage access based on IP and port Stateful inspection: Monitor connections, block suspicious activity Proxy server: Filter traffic, block malicious sites Secure coding/ better quality: Minimise vulnerabilities Regular updates: Patch software regularly Encryption: Protect data from unauthorised access and spyware Backups: Counter ransomware effects Access levels: Limit user permissions Disable unnecessary I/O devices: Prevent virus introduction Virtual machines: Test files in isolation Heuristic malware detection: Analyse files, detect obfuscation and encryption Physical security: Lock computers, restrict access Limit RAM access: Prevent malicious activities Executable control: Prevent launching from unknown sources Open-source software: More developers to spot and fix vulnerabilities Penetration testing and ethical hacking: Identify system vulnerabilities Logging: Keep records to investigate incidents and be better prepared in the future		**4**
2	**Topic: Photograph**			**Total: 8**
2.1	File size of photograph in MB 3000x4000 pixels	(3000x4000) x log2(16777216) / 8*10^6 = 36MB	2^24	**3**

2.2	How many pictures	7111	7111.111111 (Round to down to int)	**1**
2.3	Size before and after RLE in memory	20 before and 26 after	How do you work this out? I got the same value before and after It was 13x2 bc there were 13 blocks of runs of pixels U guys calculated this? I Literally wrote out the rest of the RLE for that line and counted every byte XD Oh I see thanks, Im dumb No idea on this one myself isn't it 2.5 and 3.2? the question asked for it in bytes not bits. Isn't the exact wording asking about the memory used? The values would be the same as the RLE expands to the original size in memory.	**1**
2.4	Comment on the effectiveness of RLE in this case?	Not effective as not many consecutive runs of pixels.	It uses a whole byte to store the length of a run. 255 runs isn't plausible (i think) Will there be ECF?	**1**
2.5	What makes voltage analogue and why is pixel data digital?	Voltage can vary continuously over a range of values, representing an infinite number of possible levels. Pixel data represents image information using discrete values.	I said that there infinite numbers of measurements u can take of light i and that pixel data samples it and can only take certain values depending on the camera something like that I put voltage is not in binary but can be converted to binary.	**2**
3	**Topic: Floating point**			**Total: 10**
3.1	Shade all lozenges for true statements	First one, second last and last one -Processors can most times work faster on fixed bit numbers -Floating point can be greater range for same no of bits -Fixed point can sometimes be more precise	Floating point can be greater range for same no of bits Fixed point can sometimes be more precise? Processors can work faster on fixed bit numbers? Yes it was this one There was a 3rd one too idk what it was Answer is first one, second last and last one. Omg it was two marks so i only did two lozenges	**2**
3.2	Convert floating point to decimal	-9/512	I swr it wasnt twos complement 2944. Pretty certain it was two's compliment. I'm pretty certain it wasn't after the first q then at the top of the page it said now the questions will be in twos complement and it said two questions	**2**
3.3	Closest representation of 12 49/64 in Floating point	0.1100110 0100 12.75 as decimal	Is it not two's complement for this Q? -yes you needed to shift the location of point on mantissa i think	**3**

3.4	How many extra bits minimum must be added to mantissa to be accurate?	3	(basically how to form 12 with least bits there was 4 but one already there so 3)	**1**
3.5	Most negative number in 10 mantissa 6 exponent	-2^31 or -2147483648	note: question asked to put it in I think “decimal” refers to the number base only	**2**
4	**Topic: Buses**			**Total: 9**
4.1	What is x?	Address bus  	It is the only one directional bus	**1**
4.2	How many gibibytes of memory for 36 bit address bus, 16 bits per memory location	2^36*(16/8)/1024^3 = 128 gibibytes (2^36*16)/(8*1024^3)	Oh yeah, wait did it ask for gibi? You will have done 1000^3 for giga not gibi. Wrong ans - 137 Cheeky question, asking for gibi not giga :p	**2**
4.3	Explain why USBs use serial and why the components inside a computer uses parallel was it not peripherals?	USBs use serial: -Cheaper -Doesn't suffer from skew or crosstalk -The extra speed isn’t required Components use parallel: -Enables faster data transfer -It is over short distances so effects of skew and crosstalk are minimised	Overlapping is lots of skew	**2**
4.4	Purpose of I/O controller	Manage communication between the CPU and peripheral devices. Handles data transfer, interprets commands from the CPU. Offloads the CPU from direct involvement in peripheral management, improving overall system performance.	Did anybody else mention the role of drivers allowing an application to interface with an IO device via the manager so to speak? I said i/o controller uses device drivers to translate signals from and to devices so they operate as intended. Same and I also talked about how different platforms use different languages so a translator (io Controller) is needed.	**2**
4.5	State an example of using the control bus when storing into main memory	The CPU sends a “write” signal to the memory controller. Bus grant signal Interrupts? Clock for synchronisation?	To check if the data bus is free? Use as clock for sync data transmission? Receive a status signal to know that data has been stored?	**1**

4.6	Define synchronous transmission	Data is sent in a continuous stream, synchronised by a clock signal shared between the sender and receiver. There is no need for start or stop bits		**1**
5	**Topic: TCP/IP and Magnetic Hard Disk**			**Total: 14**
5.1	Explain how magnetic hard disks store data, how data is read from a magnetic hdd and how the layers of tcp-ip stack are used in transmitting this data onto the network. 'No need to explain how it is transmitted across the network or how TCP/IP stack reversed at receiving end.'	Magnetic HDD: -Magnetic platter stores polarity which represent 1s and 0s. -the read head detects magnetic polarity -The platter spins at high speeds -Stored in concentric tracks TCP/IP model: Application - assigns port number (FTP) Transport - establishes end to end connection, splits data into packets giving sequence number, adds port to packet header Network - assigns source and destination IP addresses Link - assigns source and destination mac addresses which change at each hop	Think 4-5 marks for magnetic disk, and rest for the TCP/IP Does the data from secondary storage get paged into RAM to be fetched in FDE cycle when instruction to pass data through TCP/IP stack is called? -yh mention RAM	**12**
5.2	Advantages and disadvantages of using SSDs over HDDs in storage. Assuming they have the same amount of storage	Advantages: -SSDs have lower latency -Faster read/write speeds -Less likely to break as no moving parts Disadvantages: -Greater cost ^ Disputed whether or not it has to be per GB (we know the GB amount so you don't have to put it?)	Could you also put that over time SSDs will have sections that no longer work? I said that writing data requires you to clear an entire page? Can't you say that SSD has a limited number of read-write cycles? Cannot store data anymore after some time because oxide layer get shirt and run out eventually?	**2**
6	**Topic: Boolean algebra**			**Total: 9**
6.1	Draw the diagram for the boolean expression do not simplify !(!A.B+B+!(C.D))		Could you use a NOR gate if you draw it correctly? Definitely. Didn't they say not to simplify it	**4**
6.2	What happens to Q at each clock signal 	Output becomes D when the clock pulse changes.		**1**
6.3	Simplify the boolean expression:	!A.(B.C.!D+B.C.D+B)+!(!A+B)		**4**

	$\overline{A}(BC\overline{D}+BCD+B)+\overline{(\overline{A}+B)}$	!A.(B.C+B)+A.!B (!A.B)+(A.!B) A XOR B or $\overline{A}B+A\overline{B}$		
7	**Topic: Protocols**			**Total: 15**
7.1	http://www.loveapug.org.uk/_/pugs.html What's the domain and protocol?	Protocol: http Domain: loveapug.org.uk		**1**
7.2	How are domains organised?	Domains are organised hierarchically: ● Top-Level Domain (TLD): .uk ● Country Code TLD (ccTLD): .org.uk ● Second-Level Domain (SLD): loveapug ● Subdomain: www. (points to the web server) ● Domain: loveapug.org.uk (website name) ● Directory: /__ ● File: /pugs The DNS translates domain names into IP addresses. Domains are registered through registrars and managed for settings like nameservers and DNS records.	I thought u were supposed to say they map to an IP address and are stored in a table on DNS server - Same I did this Same i wrote about how the browser requests an ip address and stuff </3	**2**
7.2	What service do internet registries provide?	IP Address Allocation: Distribute blocks of IP addresses to Internet Service Providers and organisations. Protect the world's depleting pool of unallocated IP addresses. Looks for a previously allocated IP address that has become unused rather than allocate a new IP address.	Internet registries allocate IP addresses to ensure that each website is assigned a globally unique IP address.	**2**
7.3	How can a device outside of the LAN access one of the web servers? (port forwarding)	The client sends packets to the public IP address of the router belonging to the server's private network. The packets sent by the client contain the port number of the application running on the server that the client wishes to access. In this case port 80 for the web server.	Did you guys include subnet masking in the port forwarding question to check if they are under same subnet oof i didnt - the question said they aren't in the same network though Me neither I said subnets for dhcp not for port forwarding	**3**
7.4	Why not use DHCP server to manage a web server? What is a disadvantage of using DHCP to manage a web server?	DHCP servers assign IP addresses dynamically to devices on a network. This means the IP address assigned to the web server could change, making it difficult for clients to reliably access the web server.	DHCP dynamically assigns ip so ip of web server keeps changing? Means that attempting to access webserver wont work bc ip different. Facts Also hella inconvenient if you have to keep updating the damn port forwarding rule; experienced this myself. DHCP lease ends..	**1**
7.5	Explain how NAT is used when sending and receiving data from a non routable	When a device on a private network needs to communicate with a web server on the Internet, it sends	I put routing table	**4**

	ip address to file server on the internet	packets through the router, which makes a record of the packet before replacing the private IP address with its own. When a response is received, it is sent to the router's public IP address, which then forwards the response to the correct private IP address by using the record it made when sending the packet.		
7.6	Why would NAT not be needed if ipv6 replaces ipv4?	Because there would be enough IP addresses available so each device can have a unique routable IP address.	When is ipv6 gonna happen everywhere irl? 6th june 2035	**1**
7.8	For websocket protocol shade which lozenge is true	Full duplex		**1**
8	**Topic: Database**			**Total: 11**
8.1	Which is true?	One supplier per product (B)	.	**1**
8.2	Insert Sale 4072 into the Sale table	INSERT INTO Sale (<fields> optional) VALUES (4072,1,"29/09/2024")	"" were optional for the date?	**2**
8.3	Update product id 1 to decrease QuantityInStock by 3	UPDATE Product SET QuantityInStock = QuantityInStock - 3 WHERE ProductID =1		**3**
8.4	2 issues that could arise in a non-normalised database?	Data Redundancy: Repeated data across multiple tables increases storage requirements. Update Anomalies: Changes in one part of the database may require multiple updates, leading to possible errors if not all occurrences are updated. Insert Anomalies: Adding new data can be problematic if certain required fields are missing due to the database structure. Data Inconsistency: Redundant data can lead to discrepancies if not consistently updated. Complex Queries: Retrieving information can become more complex and less efficient.		**2**
8.5	Explain how timestamp ordering helps with concurrent access	Timestamp ordering concurrent access. They mark when commands are initiated. The database records the timestamp of the last read operation on a field and uses predefined rules to determine if executing a new command would cause data loss or inconsistency. These rules enforce correct command execution order, maintain data integrity by rejecting outdated commands, and may use locking or versioning to manage concurrent access.		**3**
9	**Topic: AI in hospital moral/ethical**			**Total: 6**
9.1	What are the moral legal and ethical concerns of using AI and algorithms in hospitals	Legal: -Who is responsible for any complications? The programmer or the hospital?	FOR A.I to work, i believe you need to train it. How is this data selected? Is there any bias in training this Artificial	**6**

	Diagnose patients from X Rays	-Are they following the Data Protection Act? Ethical: -Taking jobs of healthcare professionals -Any bias in the training of the AI Moral: -Do people consent to the use of AI and algorithms? Some people might not trust them. -In this case should a human be required to carry it out, and should they have to wait longer? -The data would have to be stored on the hospital network is this stored securely?	intelligence? How effective is it!	
10	**Topic: Assembly**			**Total: 11**
10.1	Finish the trace table for the assembly language program given. The input value is 83 in mem address 130	The final value for R1 was 211 (83+128).	The program halves 83 7 times and counts the number of 1s in the binary as each time it is shifted once to the right. There is 4 1s which is even (4 AND 1 = 0) so it preforms ORR 128 to make the left most bit 1.	**6**
10.2	What is the purpose of this?	Add odd parity bit in the left most column.	The output is the ASCII code with the parity bit in	**2**
10.3	2 advantages of assembly over high level code	Direct memory access and control, suitable for embedded systems and chips without an OS. Efficient machine code output, resulting in faster execution due to a 1:1 relationship with machine code. Reduced memory usage compared to high-level languages. Faster translation and greater control over the program. Direct processor instruction manipulation, providing flexibility and power.		**2**
10.4	Some high level languages are imperative, what does that mean in this context?	Imperative high-level languages are formed from instructions that specify how the computer should complete a task.	I said executes line by line I said write instructions	**1**
11	**Topic: Functional programming**			**Total: 3**
11.1	Describe the co domain N to R	The codomain is the set of real numbers		**1**
11.2	Why is functional programming good for multiple servers	Immutability: data does not change after it's created, no need to worry about one server altering data that another server is using. Statelessness: Given the same input functions will always	It said “describe” surely that means you need to actually say what stateless or immutable means, otherwise it would just say “state”. Map or fold??	**2**

	give the same output Supporting multiple CPU architectures, i.e x64 ARM Higher order functions simplifies parallelization of workloads across multiple servers.	

Date	Grade Boundaries						
	A*	A	B	C	D	E	F
2023	296 78.9%	237 63.2%	191 50.9%	146 38.9%	101 26.9%	56 14.9%	0 0.0%
2022	278 74.1%	223 59.5%	179 47.7%	136 36.3%	93 24.8%	50 13.3%	0 0.0%
2021	220 73.3%	177 59.0%	144 48.0%	112 37.3%	80 26.7%	48 16.0%	0 0.0%
2020	224 74.7%	183 61.0%	149 49.7%	115 38.3%	81 27.0%	47 15.7%	0 0.0%
2019	309 82.4%	261 69.6%	214 57.1%	167 44.5%	120 32.0%	74 19.7%	0 0.0%
2018	314 83.7%	260 69.3%	215 57.3%	170 45.3%	125 33.3%	80 21.3%	0 0.0%
2017	316 84.3%	264 70.4%	219 58.4%	174 46.4%	129 34.4%	84 22.4%	0 0.0%
Average	295 78.8%	242 64.6%	198 52.7%	154 41.0%	110 29.3%	66 17.6%	0 0.0%

NOTE: 2021 and 2020 don't include coursework so out of 300

Explanation: It is out of 375, paper 1 and paper 2 are out of 100 marks weighted 1.5x and coursework is 75 marks.
100*1.5+100*1.5+75=375
If you want to know percentages without coursework do:
({grade boundary} - {coursework mark}) / 300
For Example (296-71)/300=75%

How did we find this paper? Use capital i's not | or l	
Excellent	III
Good	IIIIIIIIIIIIIIIII
Okay	IIIIIIIIIIIIII

Meh	IIIIIIIIIII
Bad	IIIIIIIIIIIIIIIIIIIII
See you guys in clearing (DAMN)	IIIII

Computer Science Teachers Hall Of Fame:

Mr Brown for making us teach ourselves the entire course 🗣️🔥 <- MrBrownCS the goat
Mrs James for not being able to teach a single p2 topic
Craig and Dave for binging the night before the exam - NAH THE MORNING BEFORE THE EXAM (I second this CRAIG N DAVE THE GOAT HELL YEAH)
Mr Abdullahi for leaving half way through the fucking year
Me for teaching myself
Big up craig n dave.
Hasan Ali of TSR for those skeleton sessions.
Me for making my own Anki set on the entire course. <- real <- hey me too i used <
^-frrrrrr, didnt know there were this many anki lovers
ChatGPT to make some (from pmt notes) and wrote some myself
Fuck my CS teachers they taught me nothing. <- REALLL fuck mrs lawrence and mrs cox
BIG UP ZIGZAG SKELETON CODE BAAASSSED HOLY
^ ZIG ZAG CARRIED
Daddy statham oiled up biting the curb in 4k < Green wing reference?
PHYSICS AND MATHS TUTOR (whoever wrote the notes over there)
^ pmt saved my life, truly carried me through maths and comp sci
^ wrote revision cards from their concise notes
^Praise the PMT gods carried all my subjects
^ I name my firstborn kid PMT in honor of them saving my ass for this
Hall of SHIT: the fat textbook
Suhail for making us watch him sleep for 6 hours a week for 2 years
The one guy in the year above / few years above us that made a whole bunch of flashcards
Dr Tim Lord - if you know you know
Mr Smith and Clarkson (Actually were good teachers :D (he literally wrote the textbook we all used))
Literally taught myself the whole course on PMT my teachers were so useless

Discussion:

What score do u guys think u got?
Estimated 52% overall, am i cooked. Need a B, Am I Cooked?
ANYONE THINK THAT GRADE BOUNDARIES ARE GONNA BE 2019 LEVE AT 70% SINCE THE SKELETON CODE WAS ACTUALY VERY SIMPLE COMPARED TO ALL YEARS?
How are people comparing the skeleton code from previous years considering that most ppl wouldn't have gone through them to somewhat accurately assess the difficulty?]

^Just a calculated guess imo, the number of lines were much more, the gamee itself was basically chess, there were like 4+ classes/objects, feel like ours was much more nice
Erm what the sgma no it was harder for most people so it should be around 2023 levels
^Hopefully but last year was an actuall chess game
Yeah but lowkey like you never know plus the coding tasks were a lil harder imo for most people <3
^FAIR ^ i hope lol i need that A lol same a* would be nice but oh well yep
^ icl i gave up on an A* when i realised only like 3% of people get it WTF 3% YH damn…
https://filestore.aqa.org.uk/over/stat_pdf/AQA-A-LEVEL-STATS-JUN-2023.PDF
^ ITS 5% BUT STIL VERY LOW from 2017 to 2019 only about 3.7% get an A*
 thought the programming questions were pretty average compared to past paper questions
^they were nothing crazy imo but just a bit tedious, plus the amount of computers that died during that paper for people was insane
^ do you remember what the perfect bouncy number is? Does it have to have the same increase and same decrease?
^icl i dont remember
Oh ok ty anyway <3 <3
BLOBFISH?? WOULD BE FUNNY IF UR HERE AGAIN
How skibidi how to howwwwwwww
Bruh why does nobody give an ASS about paper 2 chz
Bye im not going to uni bruh I need A*AAA and I'm cooked in physics and CS (CS just burnout lol)
Anonymous Wombat I'm cooked bruh how did you do, you know who you are, from Anonymous Axolotl
At this point im not even getting into my insurance
Where rle question
Did u guys find this harder compared to previous papers? I haven't gone through any of them so i cant tell
^ this was the worst one out of all of them imo
^ fr
Honestly thank god people werre too confident about p1 i need the grade boundaries lowered

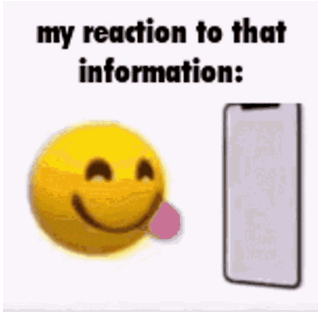
fuck

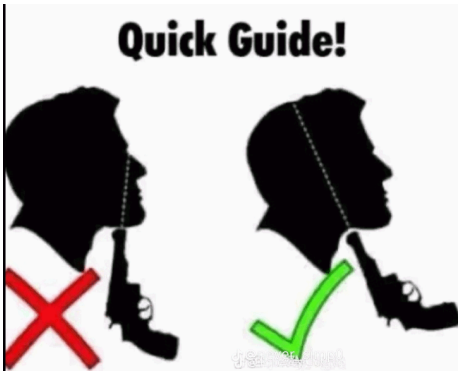
I hate myself
Clearing 2024 whos joining me?? Only you ME OMG
NO GIRL I DONT THINK YOU UNDERSTAND HOW FUCKED I AM
I think im getting a D 😢
Clearing it is…

This paper was so much yap esp that 12marker 💀💀💀💀
Where the D type flip flop Q
THE PAPER HAD NO LONG ASS FUNCTIONAL LANGUAGE QUESTION YIPEEEEE HORAAAYY
^ bro i wish it did
thoughts on grade boundaries?
Higher than 2023 but not by much. Imma be real. Apparently last years paper 1 was a lot harder than our years so i believe higher grade boundaries unfortunately. But in regards to this paper specifically, i believe it would be the same if not SLIGHTLY lower. Take my words with a pinch of salt as with everything on TSR
I disagree imo, i think they wouldn't go up but jsut stay the same if anything
Between 310 and 315 for an A*?????
Seifphjwe4oi9[rtgjh3290-wtguj09w34hjg90w4jfg904wejwefg90j 90sskibidi im fucking reateded hahadeuiohwaiodfhawiodhio
Im cooked probs like 40 on this paper and like 40 on the last papre. I need a B though :(
somehow got 0 for the tracing table it is so over for me…. Nah if u got 0 u were close, dont lose hope i think u just went for the wrong condition in the IF ELSE condition
I got a negative number bro 💀
I GOT 0 IN THE TRACE TABLE AS WELL
I got B for the boolean algebra and output = input for the assembly am i cooked
its joever
I got A in the boolean algebra skull skull
I somehow "simplified" the right answer to b ;/
It was A XOR B right?
Anyone off to nottingham trent??
Yall ily all
Thanks hamster
<3 <333333
where yall applying to? mcdonalds
sheffield, you? I applied sheffield asw
Yeah bro big up sheffield
ah thats good, im applying london unis but i neeed 3 A's
oh damn i could not cope if that were me, good luck
thanks man, gl to u 2
shi bro its crazy how fast the exams went, like thats it , we are 18 now abt to be full on adults and all, with our own lives and shi
thanks 🙏, yeah i know suddenly almost a month of stress has completely blown over
adulthood isnt fun to think about i'm gonna play minecraft in summer
mums bro
lmao same here bro, gonna hop on mc,csgo, fifa, the whole lot
that sounds like a fun mix, maybe some csgo for me too but im more into val
oh am i blobfish?
ah shi fs just lmk when ur online blobfish lmao
but yeah man gl to u with whatever u finna do in ur life, probably will never see u again but gl man
yeah bro ur blobfish

oh man thanks i didnt know, proud to be a blobfish. i think we'll lose contact after this ngl so i'm not sure i can ever tell you when i'm online. Im praying for aces for you though, i believe. good luck to you too, i hope london unis go well if u manage to get in which im sure u will
lmao bro hope u can pull off a global elite masterclass
thanks man.
im sure u will achieve all your lifegoals too man.
crazy how much we are glazing each other rn. need to calm th down xD
LMAO yeah oops its fine though
im just so gassed after this test that im feeling it today, like shi that was a good test yk
i'm half asleep rather than gassed, pmt carried me until 2am last night
pmt carried so hard, also the aqa textbook went crazy. i memorised the thing inside out fr.
Its time to learn chinese bro because you are all going to china
we r gettign deported into china
My fault bro
My nigerian brother
Whats good
nm much bro jus tired ash after that cs exam, shi i got mech and stats tommorow but thats all for another
day
I still got p3 of maths left before chem, better not fumble either
. My firm is AA for both but i need an A star on both to be satisfied
same here, my firm is AAA for loughborough and then AAB for surrey but imma change to exeter i think cuz it got industrial experience.
Exeter dont really have a big black community i heard, thats why i rejected their offer. Chose birmingham instead
Damn i firmed Bath but there aren't many black ppl so idk how it'll be like
shi bro out here rejecting russel group unis, bro is jus that guy
I meant i picked other unis so automatically rejected them lol, i wanted to go lougsbrough but i didnt take physics
birmingham is good too.
i took history, maths and comp sci along with epq but thats for a cs course in loughborough and they said it was calm.
They gave me a very high entry boundary which is a pisstake but i think i can get in.
hope so anyway, if i fumble its gonna be long days in surrey
If i fumble birmingham then im going to china
shi bro china
fr?
why china
nah bruh i aint never heard that meme, my fyp is just brainrot -
You ever heard the meme "its time to learn chinese buddy" for sports twitter?
Brainrot edits kinda peak ngl
mums bro, but icl my attention span really got to me during revision, mf i would spend hours scrolling through tiktok instead of revising, so i had to delete all socials for exam period.
Yh phone has been a big distractor tbf, i could have probably went cambridge if not for it fr fr
Fuck bald ass crofty brev
mums bro. Year 12 too, like i was out there not doing shi during my free periods. I was jus living the sixth form experience.

I always think about the fact i might get better grades than people going cambridge this year and i could have went if i just locked in sooner
well as oogway says, the past is forgotten, the future is uncertain, and the present is now, which is why its the present
shi bro cs got me talking kung fu panda quotes,
It be like that sometimes man, after i fumbled maths paper 2 i was depressed for the whole day lmao
no way u also fumbled maths paper 2 lmaoooo
i fumbled that shi too
long ass paper
I hate whites
You do aqa? I fumbleddd hardddddddddddddddddddd
nah i do edexcel. thats the thing, most ppl in my school found it easy, they were walking out saying " yeah i deffo got %100. like bruh who tf is u lying to, tf it wasnt easy
Ive learned that different people have different definitions to something being easy or hard, when i say something is good i mean like A* good, but someone might mean a B good or C good
I just realised im still the aqa chem markscheme lmao wtf





^^DFKM
Can't wait to start my bricklaying apprenticeship this September!! <3
Cant wait to work in Roblox IKEA dream job
RIP DRAKE