

Cn-k12	AQuA	Olympiad
Llama-3.1-8B		
<i>BERT (baseline)</i>		
250 (TN), 196 (FP) 142 (FN), 412 (TP)	131 (TN), 306 (FP) 159 (FN), 404 (TP)	315 (TN), 159 (FP) 135 (FN), 391 (TP)
<i>Our Model</i>		
317 (TN), 129 (FP) 180 (FN), 374 (TP)	177 (TN), 269 (FP) 147 (FN), 416 (TP)	388 (TN), 86 (FP) 153 (FN), 373 (TP)
Mistral-7B		
<i>BERT (baseline)</i>		
282 (TN), 221 (FP) 124 (FN), 373 (TP)	314 (TN), 181 (FP) 218 (FN), 287 (TP)	318 (TN), 177 (FP) 135 (FN), 370 (TP)
<i>Our Model</i>		
328 (TN), 175 (FP) 154 (FN), 343 (TP)	366 (TN), 129 (FP) 244 (FN), 281 (TP)	387 (TN), 108 (FP) 178 (FN), 327 (TP)

Table 9: Confusion matrix comparing BERT (baseline) and our model at $T = 0$ on its respective balanced test set using the best-performing layers on the test set.

T = 0 (Question + Prompt)

Let the complex numbers z_1 and z_2 have corresponding points in the complex plane that are symmetric with respect to the real axis. Given that $z_1 = 1 + i$, find $z_1 z_2$. Let's think step by step:

T = 3 (Question + Prompt + 30% of the Generation)

Let the complex numbers z_1 and z_2 have corresponding points in the complex plane that are symmetric with respect to the real axis. Given that $z_1 = 1 + i$, find $z_1 z_2$. Let's think step by step: To find z_2 , we need to understand the symmetry of complex numbers with respect to the real axis.

When a complex number is symmetric with respect to the real axis, its imaginary part is negated.

Given $z_1 = 1 + i$, we can find z_2 by negating the imaginary part of z_1 .

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T = 7 (Question + Prompt + 70% of the Generation)

Let the complex numbers z_1 and z_2 have corresponding points in the complex plane that are symmetric with respect to the real axis. Given that $z_1 = 1 + i$, find $z_1 z_2$. Let's think step by step: To find z_2 , we need to understand the symmetry of complex numbers with respect to the real axis.

When a complex number is symmetric with respect to the real axis, its imaginary part is negated.

Given $z_1 = 1 + i$, we can find z_2 by negating the imaginary part of z_1 .

So, $z_2 = 1 - i$.

Now, we need to find the product of z_1 and z_2 .

$z_1 z_2 = (1 + i)(1 - i)$

Using the difference of squares formula $(a + b)(a - b) = a^2 - b^2$, we can simplify the expression:

$z_1 z_2 = 1^2 - i^2$

Since $i^2 = -1$, we can substitute this value into the ex

Table 10: An Illustration of a sample from Cn-k12 dataset outlining how we construct the Prediction over Time dataset in our methodology.