



МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
имени М.В.ЛОМОНОСОВА

Вариант 2

Место проведения Москва
город

ПИСЬМЕННАЯ РАБОТА

Олимпиада школьников "Ломоносов"
наименование олимпиады

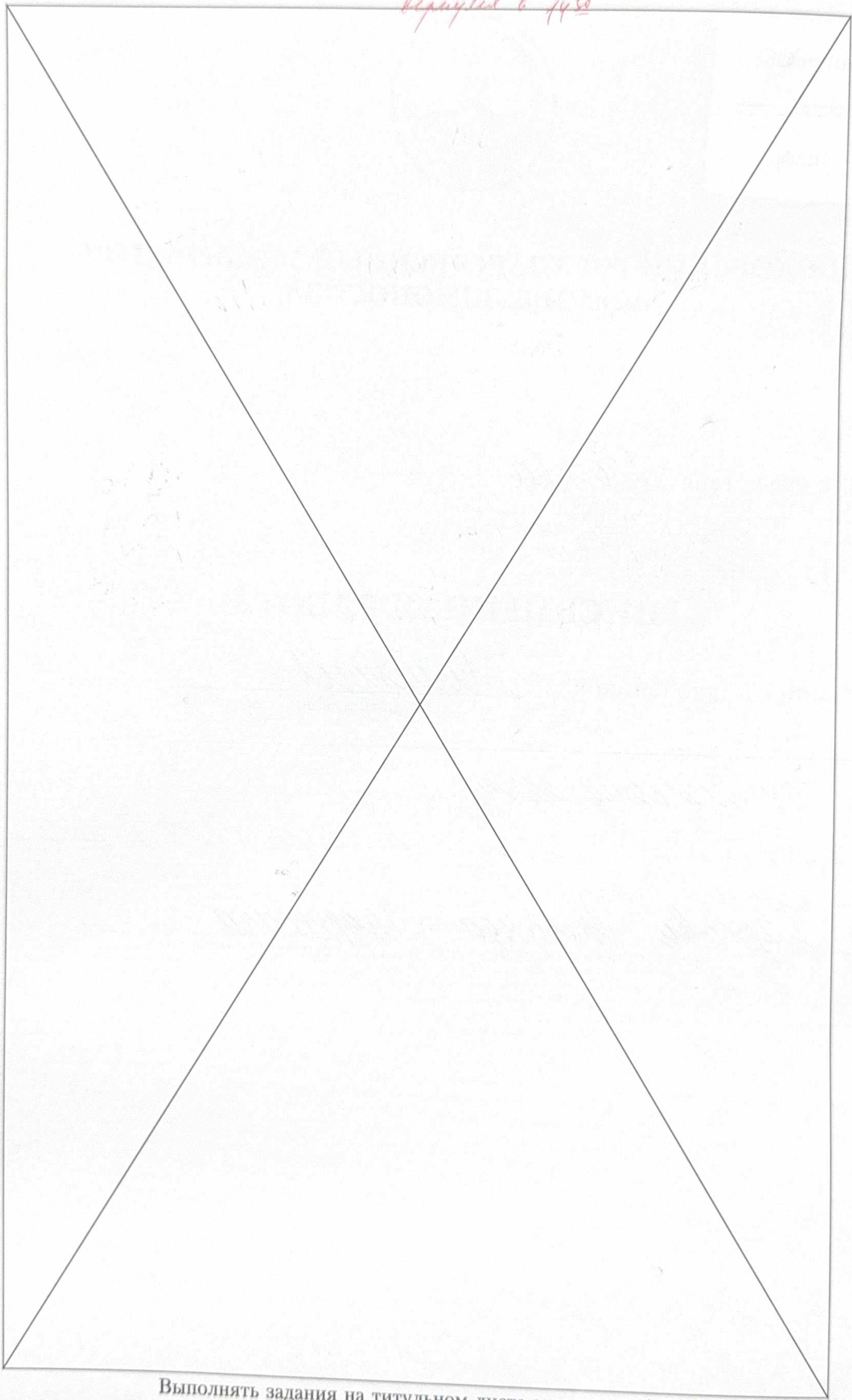
по атомистскому ядру
профиль олимпиады

Турова Эманда Андреевича
фамилия, имя, отчество участника (в родительном падеже)

Дата
« февраль 2026 года

Подпись участника
Эманда Турова

номер 8 1984
выпуск в 1450



Выполнять задания на титульном листе запрещается!

ВАРИАНТ 2

Блок 1 Вариант 6

стр. 1

Блок 1. Listening.

87
(восемьдесят семь) Оты

You are going to listen to a TED talk about love. For questions 1-10, complete the tasks.

Read the questions and be ready to listen. You will hear the text twice.

You have 10 minutes before the listening task starts. Fill in the answer boxes with your answers.

For question 1, choose one option.

1 What is the main focus of the TED talk?

A The text characterises love explained through character traits and attachment styles only.

B The text approaches love from a scientific, neurobiological perspective.

+

1	B
---	---

For questions 2 and 3, fill in the blanks with three words exactly the way they are used in the text. Articles, prepositions are also considered a word. DO NOT use contracted forms.

2 While this first stage of love can be of emotions and brain activity, it typically only lasts a few months.

3 As time goes on, these regions of the brain help you regain control and can on this distress and craving signaling.

+

2	an	intense	rollercoaster
3			

For question 4, choose ONE option which shows the meaning of the word in the context of the TED talk.

4 The word “draws” in this text was used in the following meaning:

- A attracts or elicits
- B makes, formulates, or derives
- C sucks or takes in (air, liquid, etc)
- D meanings A and B combined
- E meanings A and C combined

+

4	A
---	---

For questions 5-10, read the given information and fill in the blanks in the table with the terms/special purpose vocabulary from the list. Use only the ones that are used in the TED talk. One blank WILL NOT be filled in as the text does not provide the relevant information. Write N/A in this space.

Note: A **hormone** is a chemical messenger released into the **bloodstream** that travels to different parts of the body to **control or influence how organs and tissues work** over time. A **neurochemical** is a

chemical messenger used by the **nervous system**, especially the brain, to **send signals between nerve cells** and influence thoughts, emotions, and behaviour.

Hormones/neurochemicals	Brain areas
<p>Adrenaline prepares the body for sudden action; increases heart rate and energy.</p> <p>Cortisol helps the body manage pressure during long-term stress.</p> <p>Dopamine makes you feel pleasure, motivation, and desire to repeat enjoyable experiences.</p> <p>Endorphins reduce pain and can create a feeling of happiness.</p> <p>Estrogen affects physical development and reproductive health.</p> <p>Melatonin controls sleep and helps the body know when it is time to rest.</p> <p>Noradrenaline helps with alertness, focus, and responding to stress.</p> <p>Oxytocin helps people feel close, safe, and trusting with others.</p> <p>Prolactin involved in parenting behaviours and caregiving.</p> <p>Serotonin helps control mood, happiness, and emotional balance.</p> <p>Testosterone influences physical development and sexual attraction.</p> <p>Vasopressin fosters long-term attachment, loyalty, and commitment.</p>	<p>Amygdala becomes less reactive in secure attachment, reducing fear and emotional threat.</p> <p>Higher cortical regions regulate reasoning and impulse control, gradually reducing distress and craving over time.</p> <p>Hypothalamus produces and releases oxytocin and vasopressin, the core bonding hormones.</p> <p>Insular cortex processes emotional and physical pain, including the distress and social pain experienced during heartbreak.</p> <p>Nucleus accumbens helps turn repeated closeness into a stable, rewarding bond.</p> <p>Prefrontal cortex supports trust, long-term planning, impulse control, and commitment.</p> <p>Ventral tegmental area links attachment to reward and motivation, making closeness feel pleasurable and meaningful.</p>

63-26-80-59
(10.7)

Stage of love	Hormones / neurochemicals	Brain regions involved	Main effects described
<u>Infatuation</u> (passionate love)	5 Dopamine +	6 Ventral tegmental area; Higher cortical regions -	Euphoria, intense pleasure, motivation, craving, idealisation, reduced critical judgement
<u>Attachment</u> (compassionate love)	7 Vasopressin; Oxytocin +	8 N/A +	Bonding, trust, commitment, emotional security, relaxation, reduced stress
9 Heartbreak (break-up) -	Stress hormones; Dopamine	10 Ventral tegmental area; Insular cortex; Higher cortical regions +	Emotional and social pain, distress, craving contact, stress response, gradual emotional regulation

7+/3- TB1: 7

Блок 2 Вариант 10

Блок 2. Reading.

You are going to read two synopses, A and B, of a play by William Shakespeare.

For questions 1-10 complete the tasks.

A

Shakespeare sets the scene in Verona, Italy. Juliet and Romeo meet and fall instantly in love at a masked ball of the Capulets, and they profess their love when Romeo, unwilling to leave, climbs the wall into the orchard garden of her family's house and finds her alone at her window. Because their well-to-do families are enemies, the two are married secretly by Friar Laurence. When Tybalt, a Capulet, seeks out Romeo in revenge for the insult of Romeo's having dared to shower his attentions on Juliet, an ensuing scuffle ends in the death of Romeo's dearest friend, Mercutio and his famous words 'A plague o' both houses!' Impelled by a code of honour among men, Romeo kills Tybalt and is banished to Mantua by the Prince of Verona, who has been insistent that the family feuding cease. When Juliet's father, unaware that Juliet is already secretly married, arranges a marriage with the eminently eligible Count Paris, the young bride seeks out Friar Laurence for assistance in her desperate situation. He gives her a potion that will make her appear to be dead and proposes that she take it and that Romeo rescue her. She complies. Romeo, however, unaware of the friar's scheme because a letter has failed to reach him, returns to Verona on hearing of Juliet's apparent death. He encounters a grieving Paris at Juliet's tomb, reluctantly kills him when Paris attempts to prevent Romeo from entering the tomb, and finds Juliet in the burial vault. There he gives her a last kiss and kills himself with poison. Juliet awakens, sees the dead Romeo, and kills herself. The families learn what has happened and end their feud to the echo of Prince's words, 'For never was a story of more woe Than this of Juliet and her Romeo.'

B

The prologue of *Romeo and Juliet* calls the title characters "star-crossed lovers"—and the stars do seem to conspire against these young lovers. Romeo is a Montague, and Juliet a Capulet. Their families are enmeshed in a feud. Yet Romeo and his friends attend a party at Juliet's house in disguise. The moment the two meet they fall in love. They urgently decide that they want to be married. A friar secretly marries them, hoping to end the feud. Romeo and his companions almost immediately encounter Juliet's cousin Tybalt, who challenges Romeo. However, Romeo refuses to fight. Romeo's friend Mercutio accepts the challenge and is killed. Romeo then kills Tybalt and is banished. He spends that night with Juliet and then leaves for Mantua. Juliet's father forces her into a marriage with Count Paris. To avoid this marriage, Juliet takes a potion, given her by the friar, that makes her appear dead. The friar will send Romeo word to be at her family tomb when she awakes. The plan goes awry, and Romeo learns instead that she is dead. In the tomb, Romeo kills himself. Juliet wakes, sees his body, and commits suicide. Their deaths appear finally to end the feud.

For questions 1 and 2, decide whether the statements are true or false. Fill in the blanks with **True or False**.

1. The friar provides Juliet with a substance that makes her seem lifeless.
2. Romeo remains in Verona after his exile.

1	True
2	False

Блок 3. Vocabulary and Grammar.

Read the following text on the evolution of dance in the UK. To complete the text, solve the crossword by making new forms of the words or inserting a word. If you got the crossword right, it means you completed the text accurately. Make sure the endings of the words and spelling are correct!

In the crossword, multiple word phrases are inserted as one word.

Example:

TO INVITE - a new form - 1. WEREINVITED

A MOUSE - a new form - 2. MICE

BEAUTIFUL - a new form - 3. MOREBEAUTIFUL

INSERT A PREPOSITION - 2. INFRONTOF

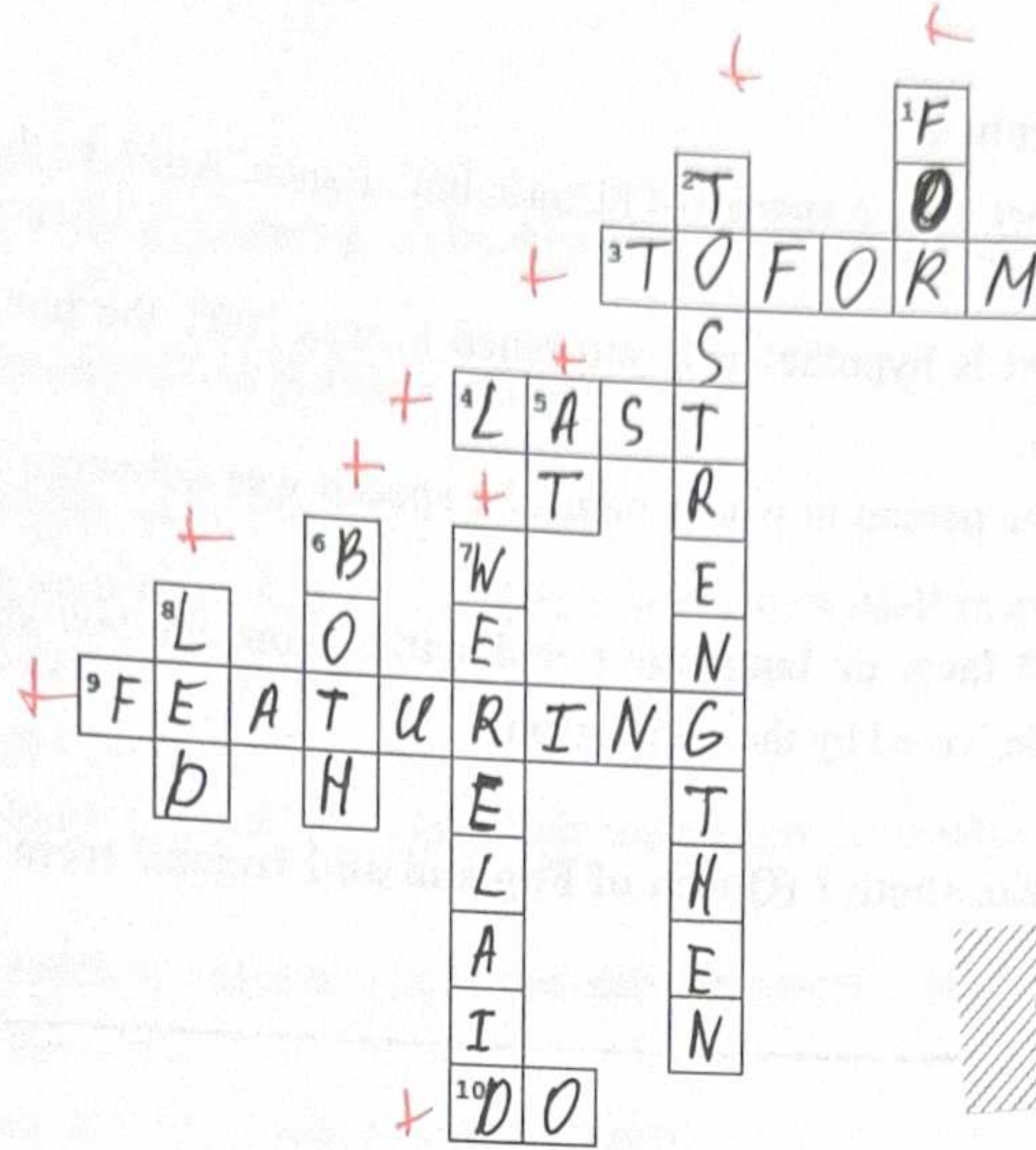
Complete the crossword with your answers. The gaps in the text are numbered according to the crossword (across and down).

Movement for change: modern dance

Modern dance thrives in Britain. It's lively, uninhibited and varied, 9. ... elements of tap, ballet, hip-hop, ballroom, Latin and the rest – there is no distinct 'national' style. The foundations 7. ... in the 1960s and 70s, guided by the *London Contemporary Dance Theatre* that produced choreographers like Richard Alston and Siobhan Davies, 6. ... of whom went on 3. ... their own progressive companies. The growth has continued over the 4. ... 20 years, with a number of interesting choreographers and companies at work.

Among them, Lea Anderson has built a reputation 1. ... converting everyday movement into dance, and Akram Khan is eulogised for blending Western contemporary dance with the Kathak dance form of south Asia. Khan has his own company, one of various progressive outfits that keep Britain 5. ... the forefront of the contemporary scene. *Random Dance*, resident company at Sadler's Wells, London, 8. ... by choreographer Wayne McGregor, has done much 2. ... the cause with emotive, beguiling moves that look as painful as they 10. ... radical. The *Rambert Dance Company* is another important force, its ballet origins redirected toward modern dance in the 1980s.

Across	Down
3. to form	1. insert a preposition
4. late	2. to strengthen
9. to feature	5. insert a preposition
10. to do	6. insert a determiner/quantifier/pronoun/adjective
	7. lay
	8. to lead



10+10

63-26-80-59
(10.7)

You are going to read an extract of an article on society. For questions 1-5, read the text and **match two halves of the sentences** below. There is one extra half you do not need to use. The beginnings of the sentences follow the same order as the full sentences in the original text.

1. Those who practise racism often believe that only low-status jobs should go to people of	A against immigrants from former colonies, and reluctance on the part of many nations in many areas to accept Southeast Asian refugees are just a few examples of the results of conflicts between racial and ethnic groups.
2. They also often believe that members of the economically and culturally dominant	B all races.
3. The lived experience of racism for members of "low-status" races can include daily insults and frequent acts and verbal expressions of contempt and disrespect, all of which have serious effects	C from racism and ethnocentrism remain a serious problem.
4. Conflicts stemming	D on social relationships.
5. Lingering racial divisions in post-apartheid South Africa, social inequality and unrest in the United States and other parts of the world, resentment in Great Britain directed	E race alone should have access to privileges, political power, economic resources, educational opportunities, and unrestricted civil rights.
	F races considered low-status.

1 F 2 E 3 D 4 C 5 A

10+5 = 15 (10+5)

Блок 4. Cultural competence.

You are going to read an extract from a **speech** of historic importance. **Analyse** the language and facts presented in it.

Prove that the person this text is hypothetically attributed to was NOT the one in whose name the speech was delivered in reality.

Guess and **write** who WAS the person in whose name the speech was delivered in reality. Make sure you spell the name correctly.

Write **70-80 words** using **3-4 facts or language peculiarities** from the text showing that it is not possible that this speech was delivered by the said person.

Was this speech spoken by Elizabeth I (Queen of England and Ireland from 17 November 1558 until her death in 1603)?

My Lords, and Gentlemen,

It is with great satisfaction that I meet you again in Parliament, and have recourse to your assistance and advice. My Relations with Foreign Powers continue to be friendly and satisfactory; and I trust that the moderation of the powers of Europe will prevent any interruption of the general peace. [...]

I announce to you also at the close of the last session of Parliament that the pacific overtures which my envoy in China had made to the Imperial Government at Peking having led to no satisfactory Result, my naval and military forces, and those of my ally The Emperor of the French, were to advance towards the Northern Provinces of China, for the purpose of supporting the just demands of the Allied Powers, and that the Earl of Elgin had been sent to China as Special Ambassador to treat with the Chinese Government.

I am glad to inform you that the operations of the Allied Forces have been attended with complete success. After the capture of the forts at the mouth of the Peiho, and several engagements with the Chinese Army, the Allied Forces became Masters of the Imperial City of Peking; and the Earl of Elgin and Baron Gros, the Ambassador of the Emperor of the French, were enabled to obtain an honourable and satisfactory settlement of all the matters in dispute. Throughout these operations, and the negotiations which followed them, the commanders and ambassadors of the Allied Powers acted with the most friendly concert. Papers on this subject will be laid before you. [...]

Serious differences have arisen among the States of the North American Union. It is impossible for me not to look with great concern upon any events which can affect the happiness and welfare of a people nearly allied to my subjects by descent, and closely connected with them by the most intimate and friendly relations. My heartfelt wish is, that these differences may be susceptible of a satisfactory adjustment.

The interest which I take in the well-being of the people of the United States cannot but be increased by the kind and cordial reception given by them to the Prince of Wales during his recent visit to the Continent of America.

I am glad to take this opportunity of expressing My warm appreciation of the loyalty and attachment to My Person and Throne manifested by my Canadian and other North American subjects on the occasion of the residence of the Prince of Wales among them. [...]

Write your answer on page 9

Блок 5. Writing.

You are going to write a **poster** helping high school students solve the problem of **boredom**.

Use the following **components of the poster structure**:

Catchy title drawing students' attention to the problem.

Definition of boredom in your own words, including how it shows itself in everyday life.

Breakdown of the main causes of boredom.

Breakdown of the consequences of boredom.

Recommendation on a book to read / film to watch and a short explanation of how it helps deal with boredom.

Recommendation of practical actions a teenager can realistically take (at least 2) to alleviate or eradicate the problem of boredom.

Summarise what has been said and make a final comment.

Although this is a poster, write it as a structured text with relevant subheadings and short paragraphs.

Write your poster in an **informal** style.

Write your poster in at least **250 words**.

Write your answer on page 9

Ответ на задание Блока 4

The speech presented can not be attributed to Elizabeth I since ~~there's~~ a pronoun "you" used to name a receiver. The receiver should have been referred to as "thou", not "you". ~~There~~ The type of English used in the ~~m~~ a pronoun "you" in plural was not used in the sixteenth century. Also, naming the Chinese capital "Pekin" instead of "Beijing" reveals the influence of French, and it has affected English ~~much~~ a century later. By the way, there is an unexpected use of capital letters in words like "result" or "relations" what marks the unlikelihood of ^{this} speech being delivered by Elizabeth I. The "United States" mentioned give a hint that the ~~speech~~ message was given at ^{the beginning of the} the 18th century before the Revolution. 8

DULLER THAN DITCH WATER,
or how to tackle boredom

• What Is It Like?

Well, brush up on Fluty Perry's songs and ~~filled out hours~~ corny similes like a legendary comparison of life instability with a... plastic bag. How dare we not follow Diver's example? Boredom associates with being stuck in the mud, restricted of movement, yet unable to counteract. Such a lousy feeling, actually, isn't it? Most face it daily failing to process teacher's honey-like

sequences of speech units, ^{each} this sentence long, or having your work done with no puzzles to solve left, in case you're a nerd.

• Why Does It Happen?

Why would one get stuck in the mud? The first ~~thing~~ that comes to mind is inattentiveness (or how one could ignore a damn lake of dirt splashing over the brim?). Students tend to lack spare time to chill and burn the midnight oil getting ^{enough} their work done. It all ends up in ^{irresistible} exhaustion, leading to boredom in class. Another reason might be simple indifference to the stem subject one has picked out to learn. "If you don't like your job, quit it!", as it's postulated in one song, ~~and~~ and displeasure is exactly what makes students feel dull. Boredom is just your failing to derive pleasure from what you're doing.

• How To Fight It?

Well, ~~the~~ the solution of this problem ~~depends on~~ should be determined by the ~~causes~~ causes of it. If you find yourself unable to process info any longer, just take a break for a while (you are to face ill-mannered student council, though; ~~take~~ ^{charm} your ^{and} skills of persuasion unless you're being scotched at and sent back to study). In case you've run out of

Продолжение ответа на задание Блока 5

~~assigned tasks~~ assigned tasks and are craving for more, contact your teacher ~~with a petition~~ and demand new ones: it's no use trying to suppress this "puzzle hunger"! If you just lack any ideas of what to do, ~~try~~ try ~~to~~ watching a movie or reading a book. There ~~is~~ a couple of nice ones, really.

• WHAT BOOKS TO READ? / WHAT FILMS TO WATCH?

Bulgakov's "Master and Margarita" is a real page-turner! You can't get dull immersing yourself into the story of Satan arriving to soviet Moscow to "wash away" phonies and grant those worthy.	"Harry Potter and the Philosopher's Stone" is the world ^{cinema} classics having an impact on generations all over the globe. The movie strikes a balance between continuousness and rashness as the narration gradually alters. You can It's impossible to keep your eyes off the screen no matter what age you are. Watching the pearl of the film industry is likely to combat dullness!
The novel combines an exciting plot, mischievous and charming characters and a vibrant setting, leaving no reader's heart untouched.	

NB! To fight boredom, it's often effective to break away from ~~the~~ reality to colorless

bright and sparkly worlds of fiction.

$$TB5: 47 (21 + 26)$$

$$OTB: 7 + 10 + 15 + 8 + 47 = 87$$

What Actions To Take?

"You success if you keep trying," they claim, as it is the truth universally acknowledged. Modi

Start with implying slight modifications into your everyday life, however, don't expect ~~once-and-for-all~~ ^{drastic} changes to

do come over you too soon: ~~in some cases fighting boredom~~ ^{might take ages.}

Mind acquiring healthy sleeping ^{habits} patterns, reducing your time on the Net as these two are sure to help you concentrate and process information quicker, preventing boredom.

Try ~~out~~ taking up new hobbies to declutter your brain ^{the feeling of} filled up with unnecessary, yet seemingly pleasurable information like trends in video apps you're ~~are~~ never to follow.

What To Say Overall?

~~Boredom is lack of interest caused by inattentiveness~~

Boredom is what you experience ^{when} being reluctant, but having to do something. ^{look into} Analyse yourself and outline the causes of it 'cause there's no other so druckle torturous dullness but self-analysis.

Take actions and rejoice—with your "water clean," having crawled out of the mud.



63-26-80-59
(10.7)

Listening

Love

1. A / B
2. ~~an~~ intense rollercoaster cluster While this first stage of love can be... of emotions
3. _____ As times goes on, → and can... on the brain regions
4. Draws + attracts and elicits Hormones

(c) seeks/takes in, (b) makes, derives, formulates
~~In fatuation~~
 b) A and B
 E) A and c)

In fatuation (passionate love)

Hormones

5

- * Testosterone
- * Dopamine
- * Endorphins

Brain

Prefrontal cortex

* Amygdala

* Ventral temporal area

Higher cortical regions

Attachment (compassionate love)

7

- * Vasopressin
- * Oxytocin
- * Serotonin

8

* Prefrontal cortex

* Nucleus accumbens

* Hypothalamus

9 Break-up Heartbreak

Dopamine

10

* Insular cortex

VTA

Higher cortical regions?

Draws towards a partner

rollercoaster

break

Breakup

Heartbreak

Break

Breakup

4. A or D

ON

~~FOR FOR FOR FOR~~

— T — of whom

~~scribble~~

wife

family feed

he

1 (F)

2 (E)

3 (D)

4 (C)

5 (A)

friend

woe
grief
lament

indulgence
enjoyment
happiness

The tradition of Vendetta is
to blame.

Juliet's father

50-60 words

As dull as ditch water

vendetta

мрачные мысли

- subheadings

- short paragraphs

~~I believe it's thanks to vendetta ^{that we} has been
resolved~~

~~Shakespeare~~

I dare to suggest that Romeo and Juliet's
tragedy should be credited to
attributed

at least 250 words

poster

Got dull as hella ditch water?

• Duller than ditch water?

• As dull as a pebble

• Why so dull, man?

• Looking damn dull

Boredom is a half-^{dead}hearted cockroach stuck
in the outlet _{alive}

~~When I f~~

Boredom is like a deep-seep pebble
with a car packed with screaming, half-alive
kids floating on top of it, unable to neither
drown or get out of it.

informal style

in your campus kitchen's sink?

When you've ~~loved~~ ^{washed away} it feels like ~~you~~
Poster? ~~lamentous~~

lamentous

~~lamentous~~
~~lamentous~~

The ultimate cause of Romeo and Juliet's
 their family ~~feud~~ ^{tragedy}

I wouldn't dare to reprove those attributing
 Shakespearean characters' ~~sorrowful~~ ^{sorrowful} death
 to the widespread tradition of vendetta,
 the centuries-long
 implying the ~~murder~~ murder of

~~I wouldn't dare to denno~~
^{lamentous}

II.

Although I wouldn't prove wrong those
 who attribute Shakespearean characters' lamentous
 death to the tradition of vendetta, implying that
 those who

~~Looking damn dull.~~
sons of ~~inattentiveness~~

Duller than ditch water,

~~or how to cope with~~
ways ~~tackle~~ boredom / ~~pyable~~
stuck in the mud ~~comparison~~ ~~pleasurate~~

Do you ever feel like a plastic
book

One may feel like a corny analyse
WHAT ~~own~~ force yourself into analyse
THE HELL IS THAT? ~~control~~ life

DEEP INTO MUD
paper ~~former~~ ~~back~~ analyse ~~back~~ ~~users~~

WHAT IS THE MUD? ~~back users~~
saw-fetched smiles ~~back users~~ Margaret

KATY PERRY ~~overall facts!~~ ~~back users~~
WHAT'S IT LIKE? ~~back users~~ ~~back users~~ ~~back users~~
DIVA ~~back users~~ ~~back users~~ ~~back users~~
Masten and ~~back users~~ ~~back users~~ ~~back users~~
Marganda ~~back users~~ ~~back users~~ ~~back users~~
Following ~~back users~~ ~~back users~~ ~~back users~~
Katy Perry's ~~back users~~ ~~back users~~ ~~back users~~

Brush up on Katy Perry
movie

~~Although I wouldn't~~
one can't avoid it

the unpredictable, yet
~~and~~ inevitable
patterns of fate.

~~Although~~

Although I wouldn't care to reproach
those attributing characters' lamentous deaths
to vendetta, the principle of ~~doing harm~~
the family members of those who ^{inflicting pain} insulted your
~~ancestors~~, I ^{am perfectly sure} personally credit Romeo
and Juliet's tragedy to

Although I do still overlook Romeo and
Juliet's that Romeo and Juliet's lamentous death
could be attributed to the principle of
inflicting pain to ^{an interpretation}

Vendetta is done voluntary.

Personally, I attribute ^{Shakespeare's} characters' lamentous
death to story to...

Poster
"catchy title"

~~in class~~
on lectures

~~as dull as ditch water~~

~~Duller than~~

~~##~~

boredom

Man, you're ^{book} looking perfectly

DULL

~~Ya~~

a book to read

Zzz...

Blah-blah-blah...

Look per.

Looking perfectly DULL

Duller than ditch water,
or how to tackle ~~the~~
boredom.

~~unbearable~~

~~##~~ ~~from~~ boredom

Personally, I attribute character's sorrowful fate to

~~attributed~~ Personally I wouldn't attribute ^{Romeo and Juliet's} character's lamentous story to anyone following

~~no one in the play~~
there is no one who ~~is~~

Personally, I attribute characters' lamentous story neither to family feud nor vendetta. ~~for~~ I believe Romeo and Juliet could have made a confession if they ~~were~~ had been to break the constraints of family feud.

3 (C) This is the main reason

(M)

That's why

~~This is why~~ ~~should be~~ ~~the way by~~

anyone following the principles of vendetta since neither Montagues nor Capulets seek to revenge blindly: even Tybalt offers Romeo to battle ~~only~~ after having noticed his devotion to Juliet.

bondom sell

~~That's why~~

This is why I find ~~unbearably~~ cruel, yet
 inevitable ~~choice~~ ^{life-long} of fate's patterns
 cruel

the only cause worth blaming. Friar
 Lawrence coincidental

(36)

~~On~~ their tragedy seems coincidental
 for ~~a single~~

So, ^{only} cruel fate ¹⁶ ²⁴ is

Cruel fate is what to blame.

the only thing worth blaming

19 5 Cruel fate is to be blamed.

So, cruel fate is to blame.

We are to blame fate only