



# GRADWRITE '24

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## PACK 2

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### 5-Part Blitz

1. Whose thermodynamic law states that the total enthalpy change in a reaction is equal to the sum of the enthalpy changes in each reaction step?

A: Germain **Hess** (accept: **Hess's Law**)

2. What economist names a scenario where overpopulation leads to famines, war, and epidemics, his namesake "trap"?

A: Thomas **Malthus**

3. In a 2024 meme format, what song by Clean Bandit and Zara Larsson plays in the background of colourful AI-generated images of dolphins?

A: "Symphony"

4. What novel, which explains why Obi Okonkwo took bribes while working in the Nigerian civil service, is the sequel to *Things Fall Apart*?

A: ***No Longer at Ease***

5. The constructed language of Sindarin was spoken by what race of beings from Middle Earth?

A: **Elves** (accept: **Quendi**, **Eldar**)

### Set of 4: Aquatic Geography

6. Discharging into the Norman Sound, what river begins in northern British Columbia and flows across its namesake territory?

A: **Yukon** River

7. The world's only exclusively freshwater seal is endemic to what deepest lake on Earth?

A: Lake **Baikal**

8. Vientiane ["vyen-TYAHN"] lies on the bend of what river, which empties into the ocean through Vietnam?

A: **Mekong** River

9. Shared by four countries, which African Great Lake is the second largest freshwater lake by volume in the world?

A: Lake **Tanganyika**

### Jackpot

10. Part 1: What word precedes "empire" in an umbrella term for the Safavid, Mughal, and Ottoman Empires due to their seemingly simultaneous rise?

Part 2: After Lord Monteaule received an anonymous letter warning him not to attend the State Opening, members of a "plot" with this word preceding it were executed for high treason.

Part 3: This substance was described in the 800s as first being discovered by alchemists searching for immortality in its country of origin, which also lists it as one of its Four Great Inventions.

Part 4: Primarily composed of saltpeter, this substance is used in pyrotechnics and firearms.

A: **gunpowder**

### Set of 3: Electrical Musical Instruments

11. What eighth-note shaped instrument is played by sliding fingers along its handle and squeezing its face?

A: **otamatone**

12. The score for *Loki* features what non-contact instrument, which registers pitch and tone with proximity sensors on antennas?

A: **theremin**

13. What leek-carrying Japanese character is the most famous mascot for Yamaha's vocal synthesizer software, VOCALOID?

A: **Hatsune Miku** (prompt on partial answers)

### Double Jump

14. What collective name is given to Bridal Veil Falls, Horseshoe Falls, and the American Falls?

A: **Niagara Falls**

15. The *James V. Glynn* and *Nikola Tesla* are owned by what tourism company, which runs sightseeing boat tours through Niagara Falls?

A: **Maid of the Mist**

### Double Jump

16. What country is home to the world's lowest national capital by altitude, Baku?

A: **Azerbaijan**

17. Azerbaijan is home to roughly 400 so-called "volcanoes" that release what substance when they erupt, giving them their nickname?

A: **mud**

### 5-Part Mystery Link

18. Who led the Gemini 8 mission forty months before making "one giant leap for mankind"?

A: Neil **Armstrong**

19. Voiced by Troy Baker, what playable character guides Ellie through the zombie apocalypse in *The Last of Us*?

A: **Joel** Miller (prompt on: Miller)

20. In Islamic belief, 360 of what object surrounded the Kaaba before being removed by the Prophet Muhammad?

A: **idol**

21. What guard was traded to the Portland Trailblazers as part of the Damian Lillard trade, before being traded again to the Celtics less than a week later?

A: Jrue **Holiday**

22. What unit of measurement was often used to measure metal weights, especially for gold in Homeric poems?

A: **talent**

Link: All answers are surnames of artists named Billy/Billie.

## END OF FIRST QUARTER

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## SECOND QUARTER

### Splits: Particle Accelerators & Anime Genres

#### Particle Accelerators

23. The largest and most powerful in the world, what particle accelerator is located on the France-Switzerland border at CERN?

A: **Large Hadron Collider** (accept: **LHC**)

24. In what American state were both the Tevatron particle accelerator and the first artificial nuclear reactor constructed?

A: **Illinois**

25. What city is home to the Nuclotron, a particle accelerator found in the Joint Institute for Nuclear Research? This Russian city is also where 7 elements, including its eponymous element 105, were discovered.

A: **Dubna**

26. What person names one of the earliest electron accelerators, which accumulates positive charges on a large sphere, and notably causes someone's hair to stand up when touching it?

A: Robert J. **Van de Graaff**

#### Anime Genres

27. The magical girl genre was revolutionized in the 1990s by what anime, which follows Usagi Tsukino saving Earth from evil as the title heroine?

A: *Pretty Guardian* **Sailor Moon** (accept: **Bishojo Senshi Sera Mun**)

28. *Ace of the Diamond*, *Blue Lock*, and *Haikyuu!!* ["high-KYOO"] are examples of what anime genre?

A: **sports** anime

29. What anime franchise created by Yoshiyuki ["yo-she-YOU-kee"] Tomino ["toe-MEE-noh"] is emblematic of the mecha anime genre, which typically features giant, pilotable humanoid robots?

A: *Mobile Suit **Gundam*** (accept: *Kido Senshi **Gandamu***)

30. *K-On!* and *Hyouka* are examples of what anime genre, which tends to romanticize everyday life and take place in mundane settings?

A: **slice-of-life** anime

### Set of 3: Proofs

31. What proof technique did Hippasus use to prove that the square root of two is irrational, by showing that assuming a true hypothesis leads to a false statement?

A: proof by **contradiction** (accept: **reductio** ad absurdum)

32. What Christian philosopher wrote five proofs for the existence of God in *Summa Theologica*?

A: Saint Thomas **Aquinas** (prompt on: St. **Thomas**)

33. What three letter initialism, which represents a Latin phrase literally meaning "what was meant to be demonstrated", is placed at the end of mathematical proofs?

A: **QED**

### Set of 4: The FIFA World Cup

34. What 3 countries are set to co-host the 2026 FIFA World Cup?

A: **Canada** AND **Mexico** AND **United States** of **America** (accept either bolded part) (accept: USA)

35. In 1930, what country won the first ever FIFA World Cup?

A: Oriental Republic of **Uruguay**

36. With 16 goals, who is the top scorer across all FIFA World Cups?

A: Miroslav **Klose**

37. What was the only country to make its debut at the 2022 FIFA World Cup?

A: State of **Qatar**

### Double Jump

38. What HBO show inspired by the Murdoch family deals with the power struggle surrounding the aging patriarch Logan Roy?

A: **Succession**

39. In Succession, what distant family member snakes his way from Doderick mascot to Tom's personal assistant?

A: **Greg** Hirsch (accept: Cousin **Greg**)

### Double Jump

40. How many instances of the letter s are in the word "disinterestedness"?

A: **4**

41. How many unique letters are in the word "disinterestedness"?

A: **7**

### Linked Set of 6

42. What bird names the team that has won the second-most World Series?

A: **cardinal**

43. What flower names a symbol used on maps to indicate cardinal directions?

A: **rose**

44. What '90s movie character talks down his love interest Rose from jumping off of the Titanic?

A: **Jack** Dawson (prompt on: **Dawson**)

45. What is the value of any face card in Blackjack?

A: **10**

46. To what Biblical prophet did God reveal the principles known as the Ten Commandments on Mount Sinai?

A: **Moses**

47. What American city was shaped by the urban planning ideology of its Chairman of the Triborough Bridge Authority, Robert Moses?

A: **New York** City (accept: **NYC**)

## END OF FIRST HALF

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## THIRD QUARTER

### Splits: The War of 1812 & Chinese Mythology

#### The War of 1812

48. Who was the American president for the duration of the War of 1812?

A: James **Madison**

49. In what battle was British general Isaac Brock killed defending against American forces?

A Battle of **Queenston Heights** (prompt on: Battle of **Queenston**)

50. Who travelled roughly 20 miles out of occupied territory to deliver news of a coming American attack on British positions?

A: Laura **Secord**

51. In what battle did anti-American forces led by Charles de Salaberry repel an invasion of Montréal?

A: Battle of the **Châteauguay**

### Chinese Mythology

52. According to Chinese myth, what goddess used river clay to mold humanity?

A: **Nüwa** (accept: **Nügua**)

53. What Chinese mythological creatures were believed to have control over water and can be found after the rabbit in the zodiac?

A: **dragon**

54. What wife of Houyi ["HOE-yee"] fittingly names the Chinese Lunar Exploration Program, as the goddess of the moon?

A: **Chang'e** (accept: **Chang Xi**)

55. What Chinese folk heroine conscripted herself in her father's place by disguising herself as a man, as depicted in a 1998 Disney film?

A: Hua **Mulan**

### Set of 4: National Drinks

56. Traditionally made from rye bread, what fermented beverage is considered the national, non-alcoholic drink of Russia?

A: **kvass** ["kuh-VAHSS"]

57. Sometimes called Berber whiskey, what flavour of tea is the national drink of Morocco?

A: **mint** tea (accept: **spearmint**)

58. Resembling fruit juice in order to seem more socially acceptable for women to drink, what country's namesake "sling" includes gin and cherry brandy?

A: **Singapore**

59. Invented in Calgary, Alberta, what drink that includes Clamato ["cla-MAH-toe"] juice and Worcestershire ["WUR-ster-shur"] sauce is the unofficial national drink of Canada?

A: **Caesar** (accept: Bloody **Caesar**)

### Jailbreak

60. What movie starring Ryan Reynolds explores what happens when imaginary friends are left behind as Bea finds them a new home?

A: ***IF***

61. What construct was first proposed by Jeremy Bentham as a circular institution where inmates are under perpetual surveillance?  
A: **panopticon**
62. What is the largest landlocked country by area?  
A: Republic of **Kazakhstan**
63. How many ways does the speaker in a Wallace Stevens poem look at a blackbird?  
A: **13**
64. Along with Caesar and Crassus, who was the third member of the First Triumvirate?  
A: **Pompey** (accept: **Gnaeus Pompeius Magnus**)
65. In mathematics, 3 plus 4 being the same as 4 plus 3 is an example of what property of multiplication and addition?  
A: **commutative** property (accept: **commutativity**)
66. The 1603 First Quarto was the first-published version of what play, which contained changes such as "To be or not to be" being moved to Act 2?  
A: **Hamlet**
67. What is the only English anagram of the word "march"?  
A: **charm**
68. The protagonist of what book series sits bitterly in a plate of spaghetti and meatballs on the cover of *Hot Mess*, the 19th installment written by Jeff Kinney?  
A: **Diary of a Wimpy Kid**
69. Who is the current leader of Canada's Green Party?  
A: Elizabeth **May**
70. With music by Sara Bareilles ["buh-RELL-iss"], in what musical does Jenna, someone with the title profession, enter a pie-baking contest?  
A: **Waitress**
71. What colourful phenomenon occurs when a star comes towards the observer due to the Doppler effect, as opposed to red shift?  
A: **blue shift**
72. What poetic foot consists of 1 stressed syllable followed by 1 unstressed syllable?  
A: **trochee**

### END OF THIRD QUARTER

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### FOURTH QUARTER

Jackpot

73. Part 1: In David Langford's "BLIT" and other science fiction short stories, images that can "crash" a human's mind are named for what creatures?

Part 2: In 2010, Eliezer Yudkowsky banned discussion on a thought experiment named for this creature on Less Wrong due to site policy against spreading potential information hazards.

Part 3: This creature names a real-life genus of reptiles endemic to the Americas that can run on water, earning them the nickname of being "Jesus Christ lizards".

Part 4: One of these creatures petrifies students and occupies the title location in *Harry Potter and the Chamber of Secrets*.

A: **basilisk** (accept: **Roko's basilisk**)

### Set of 3: Rabies

74. What historical term for rabies describes a major symptom that involves the body's inability to drink?

A: **hydrophobia**

75. What treatment protocol for rabies, now considered highly ineffective, was first used in its namesake American city?

A: **Milwaukee** protocol

76. Who developed the first rabies vaccine, having earlier developed a vaccine for anthrax and discovered that microorganisms cause disease and fermentation?

A: Louis **Pasteur**

### Streak

77. Give up to all letters that make an English word when filling in the blank in: S [BLANK] I L L.

A: **I**

A: **H**

A: **K**

A: **P**

A: **W**

### Streak

78. Found between their namesake "pauses", name up to all five major layers of the atmosphere.

A: **troposphere**

A: **stratosphere**

A: **mesosphere**

A: **thermosphere**

A: **exosphere**

### 13-Part Blitz

79. Mountains spanning what range were measured by the Great Trigonometrical Survey of India, including Mount Everest?

A: **Himalayas**

80. The Wikipedia page about which country's 1898 legislative elections was edited to remove the anti-Semitic league, the pro-Dreyfus party, and the anti-Dreyfus party?

A: **France** (accept: **French Republic**)

81. Wilhelm Wundt founded what first major psychological school of thought, which used introspection to break down mental processes into basic components?

A: **structuralism**

82. What British singer-songwriter won an Academy Award for "Writing's on the Wall" and a Grammy Award for "Stay with Me"?

A: Sam **Smith** (accept: Samuel Frederick **Smith**)

83. What event was caused by the death of Gregory XI and the subsequent elections of Urban VI, Clement VII, and John XXIII, which was ultimately resolved by the Council of Constance?

A: **Western Schism** (accept: **Papal Schism**, **Great Occidental Schism**, **Schism of 1378**) (prompt on: **Great Schism**)

84. A helicopter flying over a South African village is chased by Maureen Smales at the end of what novel by Nadine Gordimer?

A: **July's** ["JOO-lee's"] **People**

85. What character's death is the subject of the standard North American edition of the board game *Clue*?

A: Mr. John **Boddy**

86. According to VSEPR ["VESS-per"] theory, what is the bond angle in degrees of a trigonal planar molecule with no lone pairs?

A: **120°**

87. What civilization's disputed "collapse" saw a shift in power from major cities in the southern lowlands, like Tikal and Palenque ["pah-LEN-kay"], to northern ones, like Chichén Itzá?

A: **Maya** (accept: **Mayans**)

88. Which province's election was declared "too close to call" between the Conservative Party and the NDP immediately after the polls closed on October 19th?

A: **British Columbia** (accept: **BC**)

89. Mr. Lockwood, Cathy, and Heathcliff are among the characters featured in what 1847 Emily Brontë novel?

A: **Wuthering Heights**

90. What national fruit is shared by the Philippines, Pakistan, and India?

A: **mango**

91. What arcade game company is known for their games Spy Hunter, Rampage, and Mortal Kombat?

A: **Midway** Games Inc.

**END OF GAME**