



GRADWRITE

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PACK 3

6-Part Blitz

1. The song "The Girl From Ipanema" is considered representative of what genre, which literally translates to "new wave"?

A: **bossa nova**

2. Aspect, Clauser, and Zeilinger were awarded the Nobel Prize in Physics for experimentally observing violations of inequalities named for what other physicist?

A: John Stewart **Bell**

3. Milk, crushed ice, sweet fruits, and a scoop of ube ice cream make up what dessert originating from the Philippines?

A: **halo-halo**

4. In what country was a sign language developed among deaf schoolchildren following the Sandinista Revolution?

A: **Nicaragua**

5. A part of the larger Cape Fold Belt mountain system, what flat-topped mountain overlooks the city of Cape Town?

A: **Table** Mountain (accept: **Tafelberg**, **Huri+oaxa**)

6. What multi-media franchise created by Cygames reimagines famous Japanese racehorses as anime idols?

A: **Uma Musume** *Pretty Derby* (prompt: *Pretty Derby*)

Set of 4: Imperial Chinese Foreign Relations

7. Wanting protection against the nomadic Xiongnu ["ZHONG-noo"] people, the Qin ["CHIN"] began constructing what series of fortifications, which spans more than 21,000 kilometres?

A: The **Great Wall** of China

8. During what dynasty did Zhang Qian establish diplomatic relations with the Greco-Bactrian Kingdom and the Parthian Empire to expand the Silk Road?

A: Western **Han** Dynasty

9. Who ordered two invasions of Japan as emperor of the Yuan dynasty, which he established after defeating his brother in a war for the title of Great Khan?

A: **Kublai** Khan (prompt: Khan)

10. What kingdom allied with the Tang dynasty to defeat their rivals on the Korean peninsula, then fought under King Munmu to remove Tang forces from Korea?

A: **Silla**

Pyramid

11.

Part 1: What man invented Sprouts with Michael S. Paterson, proposed the Angel Problem, and invented and studied Hackenbush?

Part 2: This mathematician, who studied combinatorial game theory along with Guy

and Berlekamp in *Winning Ways for Your Mathematical Plays*, also developed surreal numbers to study Go.

Part 3: Bill Gosper disproved a conjecture about the impossibility of infinite growth in one of this mathematician's inventions by discovering a structure known as a glider gun.

Part 4: Puffers and spaceships are types of structures in a cellular automaton developed by this mathematician, his namesake Game of Life.

A: John **Conway**

Set of 3: Bees

14. What term is used to describe a collection of artificial beehives maintained by a beekeeper?

A: **apiary**

15. What ethologist described patterns called "round" and "waggle" in his book *The Dance Language and Orientation of Bees*?

A: Karl von **Frisch**

16. After spotting jars of honey on supermarket shelves, who successfully sues the entire human race for theft in *The Bee Movie*?

A: **Barry B. Benson** (accept either underlined part)

Double Jump

17. Junji Ito raised snails and researched spirals as part of the process of creating what horror manga series?

A: **Uzumaki**

18. Published as a short story companion to *Gyo*, what Ito work features the appearance of mysterious human-shaped holes in an eponymous fault line?

A: *The* **Enigma of Amigara Fault**

Double Jump

19. Which of the Dutch ABC islands comes alphabetically last?

A: **Curaçao**

20. Which of the island territories in the broader Dutch Caribbean comes alphabetically last?

A: **Sint Maarten** (reject: Saint-Martin)

5-Part Mystery Link

21. What objects' absolute magnitudes are plotted against their effective temperatures in a Hertzsprung-Russell diagram?

A: **star**

22. In Shinto mythology, what type of weapon is the Kusanagi-no-Tsurugi, whose name partially translates to "grass-cutting"?

- A: **sword**
23. What kind of supernatural being is Clarence Odbody in *It's A Wonderful Life*?
- A: **angel**
24. Aritzia went viral for their "Super" version of what quilted jacket filled with down feathers, which create its characteristic pockets of warm air?
- A: **puffer jacket** (prompt: Super Puff)
25. What type of performer do Frank Sinatra and Judy Collins both want to "send in" in popular covers of a standard from *A Little Night Music*?
- A: **clown**

All answers are words that can precede "fish" in the names of animals.

END OF FIRST QUARTER

SECOND QUARTER

Splits: *Doctor Who* & Thermodynamics

Doctor Who

26. Who is the only actor to have played multiple main iterations of the Doctor, first from 2005 to 2010 and then again in 2023?
- A: David **Tennant**
27. What collective term was used to refer to the companions of the Thirteenth Doctor?
- A: the **Fam**
28. The episode "Blink" introduced what iconic antagonists, who take on their namesake form when observed but move when they are not in view?
- A: **Weeping Angels**
29. Mostly aimed at older audiences, what spin-off series stars John Barrowman as Captain Jack Harkness and has a title that anagrams to "doctor who"?
- A: **Torchwood**

Thermodynamics

30. Minus $k_B T \ln Z$ gives a statistical expression for what thermodynamic quantity, the maximum amount of useful work that can be extracted from a system at constant temperature?
- A: **Helmholtz free energy** (prompt: free energy)
31. An isothermal expansion, adiabatic expansion, isothermal compression, and adiabatic compression make up the four steps of what maximum efficiency thermodynamic cycle, named for a French physicist?
- A: **Carnot** cycle
32. What quantity with a two-word name, known more specifically as heat of fusion for freezing or heat of vaporization for boiling, is the energy released by a substance

undergoing a constant temperature phase transition?

A: **latent heat** (accept: **latent energy**)

33. What quantity is held constant in an isobaric process, and might be measured in units of torrs, bars, or atmospheres?

A: **pressure**

Set of 3: Salt

34. What author wrote *The Price of Salt*, often described as "the first lesbian novel with a happy ending," but is better known for *Strangers on a Train* and *The Talented Mr. Ripley*?

A: Patricia **Highsmith**

35. What element is often added to table salt to prevent thyroid dysfunction?

A: **iodine** (accept: **I**)

36. To what Gujarati village, from Ahmedabad, did Mahatma Gandhi's followers travel to make salt in defiance of the British Raj's salt laws?

A: **Dandi**

Set of 4: Spelling Ancient Greek Figures

37. How would you spell the name of the philosopher whose namesake school of thought was revived by Aenesidemus ["eh-NIH-sih-DEE-muss"] and emphasizes skepticism, "Pyrrho" ["PIR-owe"]?

A: **P-Y-R-R-H-O**

38. How would you spell the name of the subject of Sophocles' last "Theban play" and the eldest daughter of Oedipus, "Antigone" ["an-TIH-guh-nee"]?

A: **A-N-T-I-G-O-N-E**

39. How would you spell the name of the commander of Pergamon and founder of the Attalid dynasty, "Philetaerus" ["fill-ih-TEE-rus"]?

A: **P-H-I-L-E-T-A-E-R-U-S**

40. How would you spell the name of the woman who, in the Oresteia ["owe-REST-ee-ah"], is depicted as the murderer of her husband Agamemnon, "Clytemnestra" ["KLIH-tem-NESS-tra"]?

A: **C-L-Y-T-E-M-N-E-S-T-R-A**

Double Jump

41. What general of the Spanish Army of Africa ruled until 1975 as the fascist dictator of Spain?

A: Francisco **Franco**

42. A brief period of Spanish democracy lasted between the regimes of Franco and what other Spanish dictator, who ruled during the 1920s?

A: Miguel **Primo de Rivera**

Double Jump

43. What name is given to the behaviour of animals like ground squirrels and bears in which they enter a dormant, metabolically depressed state to conserve energy during the winter?

A: **hibernation**

44. Animals like the desert turtle instead enter a period of dormancy during the summer, a behaviour given what name?

A: **estivation**

6-Part Linked Set

45. An arrow resembling a smile points from A to Z in the logo of what online retailer?

A: **Amazon**.com, Inc

46. A pink variety of what animal is native to and named after the Amazon river?

A: **dolphin**

47. After he was kidnapped, what Greek god retaliated against a group of pirates by turning them all into dolphins?

A: **Dionysus**

48. *Magical Animals* is the newest album from what pop-rock band, who also sing about "wine and women and wonderful vices" in their song "The Cult of Dionysus"?

A: The **Orion Experience**

49. Only Rigel is brighter than what red supergiant star in the constellation Orion?

A: **Betelgeuse** ["BEE-tell-jooss"]

50. Sophia Anne Caruso played what teenage protagonist in the Broadway adaptation of *Beetlejuice*?

A: **Lydia** Deetz (prompt: Deetz)

END OF FIRST HALF

THIRD QUARTER

Splits: Canadian Medalists at the 2024 Olympics & U.S. Supreme Court Cases

Canadian Medalists at the 2024 Olympics

51. After her clean and jerk was topped by Luo Shifang ["SHI-fahng"], what Canadian athlete won silver in the women's 59 kilogram weightlifting event?

A: Maude **Charron**

52. Christa Deguchi became the first Canadian to win gold in what martial art at the 2024 Olympics?

A: **Judo**

53. In what event did both Ethan Katzberg and Camryn Rogers earn gold medals for Canada?

A: **hammer throw**

54. What Canadian athlete, despite his injured hamstring, earned his seventh gold medal at the 2024 Paris Olympics as part of Canada's 100-metre relay team?

A: Andre **De Grasse**

20th-Century U.S. Supreme Court Cases

55. In what Supreme Court case's sole dissent did Justice John Marshall Harlan state that the "Constitution is color-blind," rejecting the majority opinion's confirmation of a Louisiana train segregation law's "separate but equal" doctrine?

A: **Plessy v. Ferguson**

56. What pseudonym was used by Norma McCorvey in a landmark 1973 US Supreme Court decision?

A: Jane **Roe**

57. A unanimous opinion in what US Supreme Court case originated the "clear and present danger" test for limitations on free speech and used an example about "shout[ing] fire in a crowded theatre"?

A: **Schenck v. United States**

58. What case saw a joint opinion co-authored by all nine justices, emphasizing agreement with the decision in *Brown v. Board* and holding that Arkansas could not delay the desegregation of schools?

A: **Cooper v. Aaron**

Set of 4: Biblically-Inspired Renaissance Art

59. Who painted a work named for Dianthus flowers and two named for a British Earl, which are among his depictions of the Virgin Mary?

A: **Raphael** (accept: **Raffaello** Sanzio da Urbino)

60. The largest painting in the Louvre is what Paolo Veronese painting depicting the event at which Jesus miraculously turned water into wine?

A: *The **Wedding at Cana*** (accept: *The **Wedding Feast at Cana***)

61. Pieter Bruegel the Elder created a "great" and "little" painting of what Biblical structure?

A: **Tower of Babel**

62. What Bethulian woman appears along with her maid in an Artemisia Gentileschi painting depicting her slaying of Holofernes?

A: **Judith**

Jailbreak

63. What is the maximum number of players on one team that are allowed on the court at a time in volleyball?

A: **6**

64. Three Roman brothers are shown receiving swords from their father before a battle with the Curiatii in what painting by Jacques-Louis David?

A: **Oath of the Horatii**

65. Who names an expression defined as the derivative of coordinate time with respect to proper time?

A: Hendrik **Lorentz**

66. The largest port in Sub-Saharan Africa is what capital of KwaZulu-Natal province in South Africa?

A: **Durban**

67. The first posthumous pardon in Canadian history was given to what activist, who was fined for sitting in the whites-only section of a movie theatre?

A: Viola **Desmond**

68. Stanley Yelnats is sent to Camp Green Lake and made to create the title features in what novel by Louis Sachar ["SACK-er"]?

A: **Holes**

69. What exclave on the Tsawwassen peninsula is separated by Boundary Bay from the rest of Washington state?

A: **Point Roberts**

70. What oxymoronic brand sold by the Loblaw Corporation is known for their characteristic generic font and plain yellow packaging?

A: **no name**

71. Enormous inflatable characters named the Wife, the Mother, and the Schoolmaster were used in performances of what rock opera by Pink Floyd?

A: *The* **Wall**

72. Arthur Appel first developed what rendering algorithm, which computes an object's primary visibilities using its namesake constructs?

A: **ray tracing** (accept: **ray casting**)

73. The English siege of what city was broken shortly after the 1429 arrival of Joan of Arc?

A: **Orléans**

74. What syllable ends any word starting with a vowel when translated into Pig Latin?

A: **way**

75. Limbang is the largest city between the two parts of what Asian country that sits on the island of Borneo?

A: **Brunei**

END OF THIRD QUARTER

FOURTH QUARTER

Pyramid

76.

Part 1: An author born in what country wrote 144 unnumbered vignettes about their experience migrating to Canada in the memoir *Ru*?

Part 2: In one novel by an author born in this country, Trevor and the protagonist meet at a tobacco farm, as recounted in an unsent letter by Little Dog to his illiterate mother.

Part 3: Jimmy Cross obsesses about his unrequited love Martha in an American story set in this country, which is the birthplace of the author of *On Earth We're Briefly Gorgeous*.

Part 4: *The Things They Carried* centers around a platoon of American soldiers stationed in this country, the birthplace of authors Kim Thúy ["TWEE"] and Ocean Vuong ["VONG"].

A: **Vietnam**

Set of 3: The South Pacific

79. What island is home to Papeete, the capital of French Polynesia?

A: **Tahiti**

80. Straying from the 180th meridian to wrap around all of Kiribati ["KEE-ruh-bass"], what cartographic convention most often demarcates a 24 hour time change?

A: **International Date Line**

81. Which Micronesian state's people were known to use rai stones up to several metres in diameter as a form of currency?

A: **Yap**

Set of 4: Underwater Agriculture

82. Players can cultivate plants like bloodroot and creepvine in what video game?

A: **Subnautica**

83. What fish's eggs are traditionally harvested by submerging kelp fronds in spawning areas during the springtime in Indigenous Pacific Northwest communities?

A: **herring**

84. What Japanese word refers to sheets of dried edible seaweed?

A: **nori**

85. What poet's collection *Sea Garden* contains her poems "Sea Rose" and "Sea Poppies"?

A: **H.D.** (accept: Hilda **Doolittle**)

15-Part Blitz

86. What brand's mascot wears ear tags of its own packaging, a round box containing spreadable cheese wedges with a red cow on the lid?

A: The **Laughing Cow** (accept: La **vache qui rit**)

87. What inventor of A-0 ["A-zero"], the first compiler, popularised a story of removing a dead moth from her computer?

A: Grace **Hopper**

88. In typography, what glyph denotes a paragraph?

A: **pilcrow**

89. What island in Micronesia contains the ruins of Nan Madol and is most the populous in the Federated States of Micronesia?

A: **Pohnpei**

90. First imaged by the Event Horizon Telescope in 2022, what is the name of the supermassive black hole at the Galactic Center of the Milky Way?

A: **Sagittarius A*** ["A-star"] (accept: **Sgr A*** ["SADGE A-star"])

91. So Close to What is the third studio album by what Calgarian pop singer?

- A: Tate **McRae**
92. What step of cellular respiration can occur without oxygen, allowing for fermentation?
A: **glycolysis**
93. What Greek word's usage as an acronym for "Jesus Christ, God's Son, Saviour" inspired the use of a fish as a symbol of Christianity?
A: **ichthys**
94. What polyphonic form of Renaissance-era classical music was used as the name of the central family in the 2021 film *Encanto*?
A: **madrigal**
95. According to a leaked PDF, which product's 2008 logo allegedly created its own energy field, gravitational pull, and universe?
A: **Pepsi**
96. What need can only be met after esteem needs have been met, as it is at the top of Maslow's hierarchy of needs?
A: **self-actualization**
97. What artist was responsible for *Nu Bleu* and *Woman With A Hat*, early works of Fauvism?
A: Henri **Matisse**
98. Opium production has largely been supplanted by crystal meth production in what self-governing region of Myanmar, split between a southern territory bordering Thailand and a northern territory bordering its largest trade partner, China?
A: **Wa** State
99. What kind of water-based paint, unlike traditional watercolours, is designed to be opaque?
A: **gouache** ["GWAHSH"]
100. What touring entertainment group run by the Falun Gong ["FAH-luhn GONG"] advertises itself as "China Before Communism"?
A: **Shen Yun** Performing Arts

END OF GAME