



2024 Summer Open (T1) – Pack 6

Head Editor: *Paul Kasiński*

Writers/Editors: *Odin Fisher-Skau, Max Gedajlovic, Ian Greig, Paul Kasiński, Jenny Mao, Jack van Nostrand, Ryan Sharpe, Joe Su, Isaac Thiessen, Gaian Valdegamo, Zhongtian Wang, Joyce Xi*

PACK 6

5-Part Blitz

1. What headstrong sister of Bianca is the titular "shrew" in *The Taming of the Shrew*?
A: **Kate** Minola (accept: **Katherine** Minola) (prompt on: Minola)
2. What natural phenomena create cirques, moraines, and drumlins?
A: **glaciers**
3. What notoriously inefficient algorithm sorts lists by sequentially comparing adjacent pairs over and over until the whole list is in order?
A: **bubble** sort
4. What is the fourth letter of the Greek alphabet?
A: **delta**
5. The Pixies' "Where Is My Mind?" plays at the conclusion of what 1999 film starring Helena Bonham Carter, Edward Norton, and Brad Pitt?
A: **Fight Club**

Double Jumps

6. What kind of musical composition, which creates polyphony when different voices introduce and then develop the same theme repeatedly, did Johann Sebastian Bach compose an "Art of"?
A: **fugue**
7. One of Bach's most famous fugues is a C minor piece, BWV 582, which opens with what kind of form, based on an eight-bar ostinato?
A: **passacaglia**
8. Who is the father of Sir, Rumi, and Blue Ivy, and the husband of Beyonce?
A: **Jay-Z** (accept: Shawn **Carter**)
9. To release his debut album *Reasonable Doubt*, what record company did Jay-Z co-found in 1995?
A: **Roc-a-Fella** Records

Set of 4: Physical Constants

10. The symbol h-bar represents what specific variant of another constant?
A: **reduced Planck's** constant (reject: Planck's constant)
11. What letter represents a constant equal to about 6.67 times 10 to the minus 11 Newton metres squared per kilogram squared?
A: big/capital/uppercase **G**
12. What scientist names the constant equal to the ideal gas constant divided by Boltzmann's constant, approximately 6.022 times 10 to the 23rd?
A: Amedeo **Avogadro**
13. Who won the 1923 Nobel Prize in Physics in part for finding the fundamental electric charge in his oil drop experiment?
A: Robert **Millikan**

Jackpot

14. Part 1: What future leader first entered politics as part of a group known as the Three Wise Men?
15. Part 2: This man scoffed at "bleeding hearts [who didn't] like to see people with helmets and guns", telling them "go on and bleed, but it's more important to keep law and order."
16. Part 3: Later in life, this man's vehement defense of federalism contributed to the failure of the Meech Lake and Charlottetown Accords.
17. Part 4: This man served as prime minister of Canada from 1968 to 1979, and again from 1980 to 1984.
A: **Pierre Elliott Trudeau** (accept: **PET, Trudeau Sr.**) (prompt on: Trudeau)

Set of 3: Soccer Rules

18. In 2018, rules outlining the permitted use of what new technology in soccer officiating were added to FIFA's rulebook?
A: **VAR** (accept: **video assistant referee**)
19. What old soccer rule immediately awarded victory to the first team to score in extra time?
A: **golden goal**
20. How many yellow cards must a player receive in one game to automatically get a red card?
A: **two**

5-Part Blitz

21. What country singer included 36 tracks on his 2023 album *One Thing at a Time*, including the single "Last Night"?
A: Morgan **Wallen**
22. What Dutch artist painted *Portrait of a Man in a Turban* and *The Arnolfini Portrait*?
A: Jan **Van Eyck**
23. What is the most expensive property in the classic version of *Monopoly*?
A: **Boardwalk**
24. Pressing Control, Alt, Windows, Shift, and L on a Windows computer opens what website, where users can endorse each other for various skills and connect with potential employers?
A: **LinkedIn**
25. Popularized by Rudy Giuliani during his time as mayor of New York, what criminological theory suggests that stopping minor, visible crimes will help reduce major crimes?
A: **broken windows** theory

END OF FIRST QUARTER

SECOND QUARTER

Splits: Ancient Americans & Classic Rom-Coms

Ancient Americans

26. The southern region of what civilization suffered an unexplained collapse around the 9th century AD, leading to the abandonment of cities like Tikal?
A: **Mayans**
27. What explorer was the first European to encounter the Taino indigenous group, in the Bahamas?
A: Christopher **Columbus**
28. Thriving early in the first millennium AD, what massive city was home to the Avenue of the Dead, including the Pyramids of the Sun and Moon?
A: **Teotihuacan**

29. The Incan god Urcuchillay took the form of what animal, the main pack animal used by the Incan empire?
A: **llama**

Classic Rom-Coms

30. What iconic line is delivered in a diner by Rob Reiner's mother in *When Harry Met Sally...*?
A: **I'll have what she's having**
31. Who played the female lead in *My Best Friend's Wedding*, *Notting Hill*, and *Pretty Woman*?
A: Julia **Roberts**
32. *Bridget Jones's Diary* is a retelling of what Jane Austen novel?
A: **Pride and Prejudice**
33. Hugh Grant dances up and down 10 Downing Street as David, the prime minister of the UK, in what ensemble Christmas rom-com?
A: **Love, Actually**

Double Jumps

34. The Nest line of smart home products is produced by what technology company, which is the lead developer of Android software?
A: **Google** (accept: **Alphabet**)
35. Name and number, please. What is the most recent phone by Google, released in early October?
A: Google **Pixel 8** (accept: Google **Pixel 8** Pro)
36. A child is born with a pig's tail in the village of Macondo in what novel by Gabriel Garcia Marquez?
A: One/A **Hundred Years of Solitude**
37. What is the name of the traveller who introduces magnets and flying carpets to Macondo, and latter makes recurring ghostly appearances?
A: **Melquiades**

Set of 4: Jewish Holidays

38. What first of the Jewish High Holy Days celebrates the new year?
A: **Rosh Hashanah** (accept: **Yom Teruah**)
39. All of the High Holy days are part of what month in the Jewish calendar?
A: **Tishrei** (accept: **Tishri**, **Ethanim**)
40. A meal known as Seder ["SAY-der"] is eaten during what holiday where unleavened bread known as matzah is eaten?
A: **Passover** (accept: **Pesach**)
41. The defeat of Haman by Mordecai and Esther is celebrated during what holiday?
A: **Purim** ["POOR-im"]

Set of 4: Shapes

42. What word refers to detailed shapes that remain self-similar at different scales - that is, they seem to have the same shape no matter how far you zoom in?
A: **fractal**
43. What name is most commonly given to the shape whose net consists of eight cubes because it is the four-dimensional analogue of the cube?
A: **tesseract** (accept: **4-cube**, **4-dimensional hypercube**) (prompt on: **hypercube**)
44. What is the radius of a circle with equation $49 = x^2 + y^2$?
A: **7**

45. How many vertices does a dodecahedron have?

A: **20**

5-Part Blitz

46. What hard rock band's debut album cover features a black and white image of the Hindenburg disaster?

A: **Led Zeppelin** (prompt on: Zeppelin)

47. Name either of Nate's two best friends from the series *Big Nate*.

A: **Francis Pope** OR **Teddy Ortiz** (accept either bolded part)

48. Who depicted a bull, a gored horse, and several people screaming in pain in his monochrome painting *Guernica*?

A: Pablo **Picasso**

49. About 200 million women in Africa, as well as Indonesia, are victims of what violent process, usually performed in the early years of a girl's life?

A: female **genital mutilation** (accept: **FGM**, **female circumcision**)

50. What animal commonly names a game in which players must make a basketball shot in the same style as the first person in the round, and get a letter if they fail?

A: **horse**

END OF FIRST HALF

THIRD QUARTER

Splits: Pokemon Institutions & Canadian Business

Pokemon Institutions

51. In what Kanto town does the Pokemon tower host the graves and spirits of departed Pokemon?

A: **Lavender** Town

52. Kahili, Glacia, and Agatha are members of different iterations of what group of trainers who serve as obstacles for anyone seeking to challenge a region's Champion?

A: **Elite Four** (prompt on: Pokemon League)

53. Jessie, James, and Meowth are all members of what group from the Pokemon anime?

A: **Team Rocket**

54. What company that develops a ghost-detecting scope is headquartered in Saffron City?

A: **Silph** Company (accept: **Silph** Co.)

Canadian Business

55. What massive structure operated by ExxonMobil off the coast of Newfoundland is the largest oil rig in the world?

A: **Hibernia**

56. The Quebec-based company Alimentation Couche-Tard is one of the world's largest operators of what type of store, operating brands such as Circle K?

A: **convenience** stores (accept: **corner** stores, **depanneurs**)

57. Known for sharing its profits directly with its employees, what company, founded by Frank Stronach, is the largest car parts manufacturer in North America?

A: **Magna** International

58. Fairmont hotels such as the Chateau Laurier, the Chateau Frontenac, and the Banff Springs were all originally owned and operated by companies in what industry?
A: **railways** (accept: **railroads**) (prompt on: **transportation**)

Double Jumps

59. Irregular, elliptical, spiral, and barred spiral are the most common shapes for what astronomical systems?
A: **galaxies**
60. Designated S0 ["ess zero"] on the Hubble Sequence, what sort of galaxy has characteristics between that of a spiral and elliptical?
A: **lenticular** galaxy
61. What empire, which was the first to make extensive use of regional governors called satraps, was founded by Cyrus the Great in 550 BC?
A: **Achaemenid** Empire (accept: **Persian** Empire)
62. What highway did Achaemenid emperor Darius the Great build to connect his huge realm, allowing for the creation of an efficient postal service?
A: **Royal Road**

Set of 3

63. With what industry would one associate Lisa Eldridge, Charlotte Tilbury, and Bobbi Brown?
A: **makeup** industry (accept: **cosmetics** industry, **beauty** industry)
64. What technique uses makeup to define and shape the structure of one's face?
A: **contouring** (accept word forms)
65. What French cosmetics retailer has a name based on the Greek word for beauty?
A: **Sephora**

Set of 4

66. What country's name comes from a word meaning "eastern kingdom" in Old High German?
A: **Austria**
67. In 1867, Austria entered into a dual monarchy with what other European country?
A: **Hungary**
68. In 1986, who became the only Austrian to ever score a Billboard Number 1 hit with his song "Rock Me Amadeus"?
A: **Falco** (accept: Johann **Holzel**)
69. What classic Austrian dish consists of a thin slice of veal that is pounded, breaded, and fried?
A: **Wiener schnitzel** (prompt on: **schnitzel**)

Linked Set of 6

70. The invention of the Bessemer Process allowed for the mass production of what alloy of iron and carbon?
A: **steel**
71. Home to companies like Dofasco and Stelco, what city in Ontario is nicknamed "Steeltown"?
A: **Hamilton**
72. What comical antagonist appears on stage three times to sing songs mocking the Americans, such as "You'll King **George III** (accept: **King George III**) (prompt on: the **King, George**)
73. Particularly for his hat but also for the rest of his clothing, what colour is associated with the human compa
A: **yellow**

74. Through what country does the Yellow River flow?
A: **China**
75. What small citrus fruit shares its name with the most widely-spoken Chinese language?
A: **mandarin** orange

END OF THIRD QUARTER

FOURTH QUARTER

Jackpot

76. Part 1: Under abnormal circumstances, what objects can sometimes be found in stacked patterns, known as their "rouleaux formation"?
77. Part 2: These objects settle in a layer below the buffy coat after undergoing centrifugation.
78. Part 3: The creation of these objects is induced by an agent known as EPO.
79. Part 4: An inherited trait common in sub-Saharan Africa can cause these objects to assume a curved appearance, a condition called sickle-cell anemia.
A: **red blood cells** (accept: **RBCs**, **erythrocytes**) (prompt on partial answers)

Streak

80. Of the 12 sovereign countries of South America, name up to all four in which a majority of the population d
A: **Brazil**
- A: **Guyana** (reject: French Guiana)
- A: **Suriname**
- A: **Paraguay**

Set of 4: Poles

82. What is currently located at about 86 degrees North and 147 degrees East?
A: **north magnetic** pole (accept: **magnetic north** pole) (reject: north pole)
83. What American city is home to the largest Polish population outside of Poland?
A: **Chicago**
84. On which day of the year do people in some European countries traditionally dance around a tall wooden pole?
A: **May Day** (accept: **May 1st**)
85. What taxonomic class of animals goes through a larval stage called a tadpole?
A: **amphibians** (accept: **Amphibia**)

Set of 3: Doors

86. The *Doors of Perception* describes the psychedelic drug experiences of what author, who also wrote about the drug soma in *Brave New World*?
A: Aldous **Huxley**
87. The Door Peninsula separates Green Bay from the rest of which Great Lake?
A: Lake **Michigan**
88. What *Game of Thrones* character got his name because of a seizure he had while repeating the phrase "hold the door"?
A: **Hodor**

12-Part Blitz

89. With 31 points, who is currently leading NHL playoff scoring?
A: Connor **McDavid**
90. What American author of thrillers is best known for creating the character Jason Bourne?
A: Robert **Ludlum**
91. What sitcom's pilot episode has been retroactively named "The One Where Monica Gets a Roommate"?
A: **Friends**
92. What position states that, although the physical brain causes all non-physical mental events, those mental events cannot interact with the brain themselves and are non-causal?
A: **epiphenomenalism**
93. Who wrote the 1902 play *The Lower Depths* and was later favoured by Joseph Stalin as the founder of socialist realism?
A: Maxim **Gorky**
94. What term describes fonts that do not have extending features at the ends of letter strokes?
A: **sans serif**
95. Jackie Robinson played for which MLB team?
A: **Brooklyn Dodgers** (accept either bolded part)
96. Which American state gives its name to a mattress that is longer but narrower than a typical king-sized mattress?
A: **California**
97. What Himalayan country has a dragon on its flag?
A: **Bhutan**
98. Off what major landmass would you find the Ross Sea?
A: **Antarctica**
99. What term refers to a folded-down corner of a page, typically used in place of a bookmark?
A: **dog ear** (accept: **dog's ear**)
100. 12 D notes introduce what tone poem by Camille Saint-Saëns that depicts Death performing a violin solo?
A: **Danse Macabre**, Opus 40

END OF GAME