



## 2024 Summer Open (T1) – Pack 7

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# PACK 7

## 5-Part Blitz

1. Sam Altman is the CEO of what company that in 2022 released DALL-E and ChatGPT to the public?  
A: **OpenAI**
2. Who allegedly threw differently-weighted balls off the Leaning Tower of Pisa to discover that all masses fall at the same speed?  
A: **Galileo Galilei** (accept either bolded part)
3. What is the Earth's largest tectonic plate?  
A: **Pacific** Plate
4. In a 2022 documentary, what former Olympic distance runner revealed that his birth name was Hussein Abdi Kahin and that he had been trafficked to the UK as a child?  
A: Mohamed "Mo" **Farah**
5. What items does a milliner make?  
A: **hats**

## Double Jumps

6. What author wrote about the title character's fatal injury sustained hanging curtains in his novella *The Death of Ivan Ilyich*?  
A: Leo **Tolstoy**
7. The burial of a peasant named Pahom in a six-foot-long grave answers the titular question of what short story by Leo Tolstoy?  
A: "**How Much Land Does a Man Need?**"
8. The term "philatelist" refers to a collector of what objects?  
A: postage **stamps**
9. Sandford Fleming designed what first Canadian postage stamp, introduced in 1851?  
A: **Three-Penny Beaver** (accept: **Three-Pence Beaver**)

## Set of 4: Southeast Asia

10. What island group lies between Mindanao and Luzon in the Philippines?  
A: **Visayan** Islands (accept: the **Visayas**)
11. What European country colonized Vietnam, Laos, and Cambodia in the 19th century?  
A: **France**
12. Most people in Burma, Thailand, Laos, and Cambodia follow what religion?  
A: Theravada **Buddhism** (accept: **Buddhist**)
13. According to the IMF, what country has the world's highest per capita GDP at purchasing power parity?  
A: **Singapore**

## Jackpot

14. Part 1: Who won a great victory by turning the Gazala Line and overrunning "the Cauldron"?
15. Part 2: As part of the construction and expansion of the Atlantic Wall, this person implemented a system of upright wooden poles meant to deter parachutists, known as their namesake "asparagus".

16. Part 3: This man was forced to commit suicide following the revelation of his involvement in the July Plot.  
17. Part 4: This field marshal led the Afrika Korps during World War II and was nicknamed the Desert Fox.  
A: Erwin **Rommel**

### Set of 3: Sports Curses

18. What curse was said to be responsible for the 86-year championship drought suffered by the Boston Red Sox?  
A: Curse of the **Bambino**
19. The disappearance of Toronto Maple Leafs defenceman Bill Barilko and the championship drought that followed is the subject of what Tragically Hip song?  
A: **"Fifty Mission Cap"**
20. Since Mario's win in 1969, no member of the Andretti family has been able to win what prestigious race?  
A: **Indianapolis 500** (accept: **Indy 500**)

### 5-Part Blitz

21. How many bits is an IEEE 754 single-precision floating point number?  
A: **32**
22. What Romantic poet's works inspired the title of John Steinbeck's *Of Mice and Men* and include "Tam o'Shanter" and "Auld Lang Syne"?  
A: Robert **Burns** (accept: Rabbie **Burns**)
23. What cosmetic product, also known as rouge, is used for colouring one's cheeks?  
A: **blush**
24. When they graduate university, Canadians who studied what field are presented with an iron ring?  
A: **engineering**
25. Name either of the abiotic pollination methods that flowers use when they are not evolved to attract pollinators.  
A: **wind** pollination (accept: **anemophily**) OR **water** pollination (accept: **hydrophily**)

## END OF FIRST QUARTER

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## SECOND QUARTER

### Splits: Trigonometry & Jack Nicholson

#### Trigonometry

26. What is the period, in radians, of the function  $Y$  equals 2 sine of 3  $x$ ?  
A:  **$\frac{2\pi}{3}$**  radians (accept: **two over three pi** radians, **two thirds** of **pi** radians)
27. If an angle measures 30 degrees, how many radians does it measure?  
A:  **$\frac{\pi}{6}$**  radians (accept: **one sixth pi** radians)
28. What is the first derivative of cosine?  
A: **negative sine** (accept: **minus sine**)
29. Because the cosine function is zero at  $\frac{\pi}{2}$ , which two of the six basic trigonometric functions have vertical asymptotes there?  
A: **tangent** AND **secant**

### Jack Nicholson

30. Nicholson played Randle P. McMurphy in what 1975 Milos Forman movie set at an asylum?  
A: ***One Flew Over the Cuckoo's Nest***
31. What iconic five-word line did Nicholson deliver while playing Colonel Jessup in a courtroom scene in *A Few Good Men*?  
A: **"You can't handle the truth!"**
32. In what film does Nicholson play Bobby Dupea, a former classical pianist living a blue-collar life who must return to his family home when his father gets sick?  
A: ***Five Easy Pieces***
33. Nicholson famously yelled "Here's Johnny!" in what Stanley Kubrick movie?  
A: ***The Shining***

### Double Jumps

34. Switzerland is divided into 26 federated states known as what?  
A: **cantons**
35. Bellinzona is the capital of which canton, the only one where Italian is the sole official language?  
A: **Ticino**
36. What duo worked together to write *The King and I*, *Oklahoma!*, and many other Broadway musicals?  
A: Richard **Rodgers** AND Oscar **Hammerstein II**
37. The song "Some Enchanted Evening" was written for what other Rodgers and Hammerstein musical, in which a nurse struggles to accept her lover's mixed-race children?  
A: ***South Pacific***

### Set of 4: Homographs

The following questions give descriptions for a set of homographs, words that are spelled the same way but differ in meaning. Identify the word that satisfies all descriptions.

38. A sudden and rapid movement; a Jamaican spice used on meat; an unkind and obnoxious person.  
A: **jerk**
39. An emphasized detail or area; stress on a musical note; the manner of speaking of a certain area.  
A: **accent**
40. The whip used by jockeys; to change the boundaries of a photograph; an agricultural product.  
A: **crop**
41. An enclosed property containing multiple structures; to add to a problem and make it worse; a chemical made up of multiple elements.  
A: **compound**

### Set of 4

42. What nonmetal is found in the ores galena, cinnabar, and pyrite?  
A: **sulphur** (accept: **S**)
43. What four-letter prefix is used to denote moieties ["mo-AYY-it-eez"] in which a more commonly present oxygen atom is replaced with sulphur?  
A: **thio-**
44. What element is found alongside sulfur in the active site of aconitase, NADH dehydrogenase, and the complex II and complex III enzymes?  
A: **iron** (accept: **Fe**)
45. Name both proteogenic amino acids that contain sulfur.  
A: **methionine** AND **cysteine**

## 5-Part Blitz

46. What disease causes an inflammation of the gums?  
A: **gingivitis**
47. Which period of classical music is usually said to have lasted from about 1600 to 1750, which happens to be the year Bach died?  
A: **Baroque** period
48. What is the name of the brown mushroom-shaped walking enemies in the *Mario* franchise?  
A: **Goombas**
49. Mass-produced luxury homes found in American suburbs are referred to by what McDonald's-inspired term?  
A: **McMansion**
50. What is the tallest mountain in Washington state?  
A: Mount **Rainier** (accept: **Tacoma, Tahoma**)

## END OF FIRST HALF

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## THIRD QUARTER

### Splits: Alliterative Literature & Ancient Greece

#### Alliterative Literature

51. What author depicted a serial killer who targets individuals with alliterative names in *The ABC Murders*, her 11th story featuring detective Hercule Poirot?  
A: Agatha **Christie**
52. What "handsome sailor" who inadvertently kills his ship's master-at-arms is the titular protagonist of an unfinished 1891 novella by Herman Melville?  
A: **Billy Budd** (accept either bolded part)
53. What character must eventually marry Tyrion Lannister after initially being betrothed to Joffrey Baratheon?  
A: **Sansa Stark** (prompt on partial answers)
54. Alongside his partner Miles Archer, what fictional detective is hired by Brigid O'Shaughnessy in a 1931 novel by Dashiell Hammett?  
A: **Sam Spade** (accept either bolded part)

#### Ancient Greece

55. What alliance opposed the Peloponnesian League and its Achaemenid allies in the Peloponnesian War?  
A: **Delian** League
56. Creon, in *Antigone*, and Oedipus, in *Oedipus Rex*, are both advised by what blind prophet?  
A: **Tiresias**
57. The Colossus of Rhodes depicted what god of the sun?  
A: **Helios**
58. Found on the slopes of Mount Parnassus, what city's temple of Apollo was home to Pythia ["PITH-ee-uh"], its namesake oracle?  
A: **Delphi** ["DEL-fee"]

#### Double Jumps

59. Because it contains almost all of the atmosphere's water vapour, which layer of the atmosphere is where most weather takes place?  
A: **troposphere**
60. What name refers to the boundary between the troposphere and the stratosphere, where temperature stops falling and begins to rise?  
A: **tropopause**
61. Rhythm and Broadway are two styles of what kind of dance, which uses specialized shoes with metal fittings on the heels and soles?  
A: **tap** dancing
62. What tap dancer was the highest-paid Black performer in America for the first half of the twentieth century?  
A: Bill **Robinson** (accept: Mr. **Bojangles**)

### **Set of 3: Dolls**

63. By what Russian name are nesting dolls known?  
A: **matryoshka** dolls
64. Barbara Millicent Roberts is the full name of what iconic doll by Mattel?  
A: **Barbie** doll
65. In 1982, Coleco Industries released the first of what wildly popular line of cloth dolls with plastic heads?  
A: **Cabbage Patch Kids**

### **Set of 3: Separatism in Canada**

66. Which province elected 18 Anti-Confederation MPs to the first Canadian parliament, most notably including Joseph Howe?  
A: **Nova Scotia**
67. Name both provincial political parties in the National Assembly of Quebec that support Quebec sovereignty.  
A: **Parti Québécois** (accept: **PQ**) AND **Québec solidaire** (accept: **QS**)
68. In 2022, which province introduced a namesake Sovereignty Act under its premier Danielle Smith?  
A: **Alberta**

### **Set of 3: European Cuisine**

Given the description of a dish and its name, give its country of origin.

69. A stew of meat and vegetables seasoned with paprika, called goulash.  
A: **Hungary**
70. A tart with custard inside called a pastel de nata.  
A: **Portugal**
71. A dessert made with espresso, ladyfingers, and mascarpone, called tiramisu.  
A: **Italy**

### **Linked Set of 4**

72. After Houston, Dallas, and San Antonio, what is the fourth-largest city in Texas, and its capital?  
A: **Austin**
73. By what two-word nickname was professional wrestler Steve Austin known?  
A: **Stone Cold**

74. What kind of virus is responsible for most cases of the common cold?  
A: **rhinovirus**
75. Which body part is referred to in the word "rhinovirus"?  
A: **nose**

### END OF THIRD QUARTER

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### FOURTH QUARTER

#### Jackpot

76. Part 1: Members of the Royal Ballet defied their superiors to appear alongside what person in a music video, in which they pay homage to the dancer Vaslav Nijinsky?
77. Part 2: In the aforementioned video, this man and his bandmates dressed as women in a parody of Coronation Street.
78. Part 3: This man rose to international fame by writing a song about a woman who avoids complications by never keeping the same address and keeps "Moët et Chandon in her pretty cabinet".
79. Part 4: This man sang lead vocals on the songs "I Want to Break Free", "Killer Queen", and "Bohemian Rhapsody".  
A: Freddie **Mercury** (accept: Farrouk **Bulsara**)

#### Streak

80. Name up to all four of the countries that danced a stately quadrille as they rearranged alliances in the Diplomatic Revolution, ahead of the Seven Years' War.  
A: Great **Britain** (accept: **United Kingdom, UK**) (reject: England)  
A: **France**  
A: **Austria**  
A: **Prussia**

#### Streak

82. Name up to all of the "mane 6" protagonists of *My Little Pony: Friendship Is Magic*.  
A: **Twilight Sparkle**  
A: **Rarity**  
A: **Rainbow Dash**  
A: **Applejack**  
A: **Pinkie Pie**  
A: **Fluttershy**

#### Set of 4: South Africa

85. The second person ever to captain a team to consecutive World Cup victories, who is the current captain of the Springboks, South Africa's national rugby team?  
A: Siya **Kolisi**
86. Who became the first ever popularly-elected president of South Africa in 1994?  
A: Nelson **Mandela**

87. Home to South Africa's largest Asian population, what largest city in Kwa-Zulu Natal is South Africa's main port?  
A: **Durban**
88. Who described the ballroom-dancing servants Sam and Willie serving the title character in his play *Master Harold...and the Boys*?  
A: Athol **Fugard**

### 12-Part Blitz

89. Henry the Navigator hailed from what country?  
A: **Portugal**
90. What symbol that can be used to represent an exponent is found as the shift-6 key on a standard keyboard?  
A: **caret**
91. Which layer of the Earth lies between the crust and the core?  
A: **mantle**
92. Machismo, fear of difference, and a cult of tradition were among the fourteen properties identified with what ideology in a 1995 essay by Umberto Eco?  
A: ur-**fascism** (accept word forms)
93. Who is the protagonist of the original *Half-Life* game?  
A: **Gordon Freeman** (accept either bolded part)
94. What type of musical texture involves multiple independent melodies sounded at once?  
A: **polyphonic** (accept: **polyphony, counterpoint, contrapuntal**)
95. In photography, what term refers to the time just after the sun rises or before it sets, when lighting is soft?  
A: **golden hour** (accept: **magic hour**)
96. What quantity represents the maximum work that can be extracted from a system, and is represented by G?  
A: **Gibbs free energy** (prompt on: free energy)
97. What colloquial name for an exceptionally high-scoring cricket player also refers to a Roman military position?  
A: **centurion**
98. What time signature is also known as common time?  
A: **4/4** ["four four"]
99. What body part contains the glenoid labrum and the rotator cuff?  
A: **shoulder**
100. What sea that separates Australia from the Solomon Islands is named after a marine invertebrate?  
A: **Coral** Sea

**END OF GAME**