**MATZEN MATRIX REASONING**

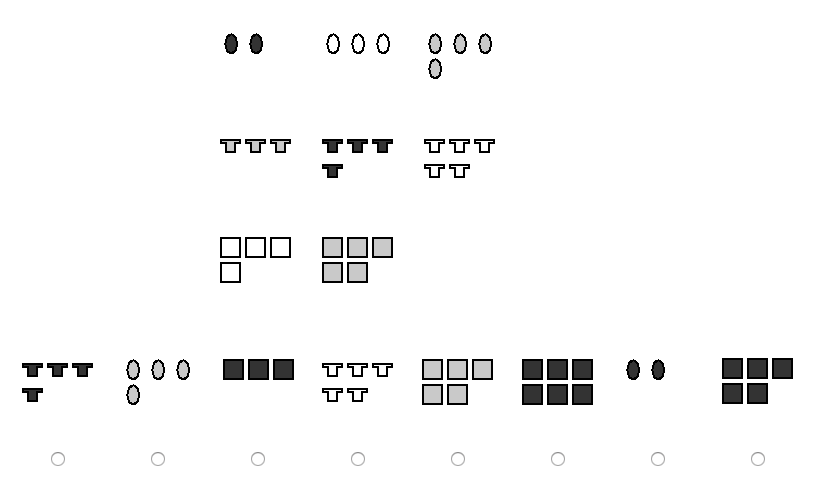
On the following pages, you will find 11 different problems.

Each problem is a box with 3 rows and 3 columns. The bottom-right corner in each of the boxes will be left empty. Your job is to decide which of the possible solutions (shown below the box) fits logically in the bottom-right corner.

You can determine this by looking at how the other patterns change across rows and down columns. There is only one correct answer for each problem.

There will be a 2-minute time limit for each question. If the time runs out before you answer a question just move on to the next one.

[This image shows an example problem. Each problem consists of 9 image files: the problem itself and 8 answer options. The answer images are arranged in two rows of four.]

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**DIECKMANN NUMBER SERIES**

In this section, you will be presented with nine sequences of numbers. Your task is to find the number that should go in the blank to complete each sequence.

For example, consider the following series: 2, 4, 3, 9, 4, \_. For this series, the correct answer is 16, because the series presents a sequence of consecutive numbers (2, 3, 4), each of which is followed by the same number squared: 2 squared is 4, 3 squared is 9, and 4 squared is 16. This is just one example: The number sequences presented to you will involve various patterns or rules.

There will be a 2-minute time limit for each question. If the time runs out before you answer a question just move on to the next one.

*Note: Only the kinds of characters presented in the series (e.g., numbers, slashes, minus signs) may be typed in the text boxes.*

1. 10, 4, \_\_\_, -8, -14, -20

[Answer: -2]

1. 3, 6, 10, 15, 21, \_\_\_

[Answer: 28]

1. 121, 100, 81, \_\_\_, 49

[Answer: 64]

1. 3, 10, 16, 23, \_\_\_, 36

[Answer: 29]

1. 3/21, \_\_\_, 13/11, 18/6, 23/1, 28/-4

[Answer: 8/16]

1. 200, 198, 192, 174, \_\_\_

[Answer: 120]

1. 3, 2, 10, 4, 19, 6, 30, 8, \_\_\_

[Answer: 43]

1. 10000, 9000, \_\_\_, 8890, 8889

[Answer: 8900]

1. 3/4, 4/6, 6/8, 8/12, \_\_\_

[Answer: 12/16]

**COGNITIVE REFLECTION TEST**

Enter the correct answer for each of the following questions.

*Note: For each question, your response should be expressed as a positive integer (no decimals, fractions, or special characters are permitted).*

A bat and a ball cost $1.10 in total. The bat costs a dollar more than the ball. How much does the ball cost (in cents)?

\_\_\_\_\_ [Answer: 5]

If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets (in minutes)?

\_\_\_\_\_ [Answer: 5]

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake (in days)?

\_\_\_\_\_ [Answer: 47]

If it takes 2 nurses 2 minutes to measure the blood pressure of 2 patients, how long would it take 200 nurses to measure the blood pressure of 200 patients (in minutes)?

\_\_\_\_\_ [Answer: 2]

Soup and salad cost $5.50 in total. The soup costs a dollar more than the salad. How much does the salad cost (in cents)?

\_\_\_\_\_ [Answer: 225]

Sally is making sun tea. Every hour, the concentration of the tea doubles. If it takes 6 hours for the tea to be ready, how long would it take for the tea to reach half of the final concentration (in hours)?

\_\_\_\_\_ [Answer: 5]

**BERLIN NUMERACY TEST**

Please answer the questions that follow. Do not use a calculator but feel free to use scratch paper for notes.

*Note: Only the kinds of characters prescribed by the question (e.g., numbers and decimal points) may be typed in the text boxes.*

Out of 1,000 people in a small town 500 are members of a choir. Out of these 500 members in the choir 100 are men. Out of the 500 inhabitants that are not in the choir 300 are men. What is the probability that a randomly drawn man is a member of the choir? Please indicate the probability as a decimal between 0 and 1 (0=0%, .5=50%, 1=100%)

\_\_\_\_\_ [Answer: 0.25]

Imagine we are throwing a five-sided die 50 times. On average, out of these 50 throws how many times would this five-sided die show an odd number (1, 3, or 5)?

\_\_\_\_\_ [Answer: 30]

Imagine we are throwing a loaded die (6 sides). The probability that the die shows a 6 is twice as high as the probability of each of the other numbers. On average, out of 70 throws how many times would the die show the number 6?

\_\_\_\_\_ [Answer: 20]

In a forest 20% of mushrooms are red, 50% brown and 30% white. A red mushroom is poisonous with a probability of 20%. A mushroom that is not red is poisonous with a probability of 5%. What is the probability that a poisonous mushroom in the forest is red? Please indicate the probability as a decimal between 0 and 1.

\_\_\_\_\_ [Answer: 0.5]

**ACTIVELY OPEN-MINDED THINKING**

[Items marked with [REVERSED] are reverse-scored prior to averaging item scores. i.e., a response of 1 is recoded as 5. (This can be done by subtracting a participant’s response from 6).]

Please consider each of the statements below, and give the response that best describes your views on a scale from "Strongly Disagree" to "Strongly Agree".

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Allowing oneself to be convinced by an opposing argument is a sign of good character.

* Disagree strongly
* Disagree
* Neither agree nor disagree
* Agree
* Agree strongly

People should take into consideration evidence that goes against their beliefs.

People should revise their beliefs in response to new information or evidence.

Changing your mind is a sign of weakness. [REVERSED]

Intuition is the best guide in making decisions. [REVERSED]

It is important to persevere in your beliefs even when evidence is brought to bear against them. [REVERSED]

One should disregard evidence that conflicts with one’s established beliefs. [REVERSED]

People should search actively for reasons why their beliefs might be wrong.

It is more useful to pay attention to those who disagree with us than to pay attention to those who agree.

**NEED FOR COGNITION**

[Items marked with [REVERSED] are reverse-scored prior to averaging item scores. i.e., a response of 1 is recoded as 5. (This can be done by subtracting a participant’s response from 6).]

Please rate your agreement or disagreement with the following statements.

I prefer complex to simple problems.

* Disagree strongly
* Disagree
* Neither agree nor disagree
* Agree
* Agree strongly

I like the responsibility of handling a situation that requires a lot of thinking.

Thinking is not my idea of fun. [REVERSED]

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. [REVERSED]

I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something. [REVERSED]

I find satisfaction in deliberating hard and for long hours.

I only think as hard as I have to. [REVERSED]

I prefer to think about small daily projects rather than long term ones. [REVERSED]

I like tasks that require little thought once I’ve learned them. [REVERSED]

The idea of relying on thought to make my way to the top appeals to me.

I really enjoy a task that involves coming up with new solutions to problems.

Learning new ways to think doesn’t excite me very much. [REVERSED]

I prefer my life to be filled with puzzles that I must solve.

The notion of thinking abstractly is appealing to me.

I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

I feel relief rather than satisfaction after completing a task that requires a lot of mental effort. [REVERSED]

It’s enough for me that something gets the job done; I don’t care how or why it works. [REVERSED]

I usually end up deliberating about issues even when they do not affect me personally.

**POLITICAL KNOWLEDGE (Season 1)**

In this section, you will be shown 50 statements and asked to answer whether each statement is true or false.

We will also ask you to rate how confident you are that your answer is correct by assigning a probability between 50% and 100% to your answer. If you are completely sure that your answer is correct, you should rate your confidence as 100%. If you are only guessing, you should rate your confidence as 50%. If you think your answer may be right but are not sure, you should rate your confidence somewhere between 50% and 100%.

Do not attempt to look up the answer to any of these questions.

*Note: These questions center around current events as of mid-2017. Although this test is updated periodically, some of the questions may be outdated. If you encounter a question you believe is no longer relevant, answer based on your knowledge of the* current *state of the world at the time you are answering these questions.*

[Category: Global Economics and Finance]

1. In 2016, Mexico had a larger GDP than Switzerland.
   * True[correct]
   * False

What is the probability that your answer is correct?

* 50% (Just guessing)
* 60%
* 70%
* 80%
* 90%
* 100% (Completely Certain)

**This confidence question is repeated after each and every true/false political knowledge question**.]

1. The average monthly Brent Crude oil price from 2014-2017 has been below $120 but above $25.
   * True [correct]
   * False
2. From 2001 to 2015, the Japanese economy has registered GDP growth rates between 8 and 12%.
   * True
   * False [correct]
3. The World Trade Organization views agricultural subsidies as a major problem in moving forward with trade liberalization.
   * True [correct]
   * False
4. The European Union accounts for up to 75% of the Foreign Direct Investment stocks in Russia.
   * True [correct]
   * False
5. According to the Society for Worldwide Interbank Financial Telecommunication (SWIFT), in January 2017 the Chinese renminbi was ranked third in world payments currency by value, behind the US dollar and the Euro.
   * True
   * False [correct]
6. Brazil recorded the lowest GDP growth rate in South America during 2016.
   * True
   * False [correct]
7. China’s total trade (exports plus imports in goods and services) with Japan is greater than its total trade with the United States.
   * True
   * False [correct]
8. There has been virtually zero economic growth in India over the last 10 years.
   * True
   * False [correct]
9. Since democratization, the Indonesian economy has grown faster than it did during the Suharto dictatorship.
   * True
   * False [correct]

[Category: International Security and Foreign Policy]

1. The Iranian nuclear power plant in Bushehr opened in September 2011 and was built with mostly North Korean assistance.
   * True
   * False [correct]
2. Cuba helped organize negotiations between the government of Colombia and the FARC (Spanish acronym), the Revolutionary Armed Forces of Colombia.
   * True [correct]
   * False
3. The United States is a signatory to the Nuclear Non-proliferation Treaty.
   * True [correct]
   * False
4. Permanent members of the UN Security Council include the U.S., China, Germany, Brazil and Russia.
   * True
   * False [correct]
5. As of 2016, the Chinese People's Liberation Army-Navy (PLAN) had built several islands in the South China Sea to project its naval power over the region.
   * True [correct]
   * False
6. According to the International Atomic Energy Agency (IAEA), Iran is in compliance with the JCPOA (Joint Comprehensive Plan of Action) enacted in 2015 and is no longer on a path toward developing nuclear weapons.
   * True [correct]
   * False
7. In 2014, the Ukrainian territory of Crimea was annexed by the Russian Federation.
   * True [correct]
   * False
8. The United States has signed the Ottawa Treaty to ban the use of antipersonnel landmines.
   * True
   * False [correct]
9. Hamas is a Palestinian political-military movement that currently controls Gaza.
   * True [correct]
   * False
10. North Korea has successfully tested an Intercontinental Ballistic Missile (ICBM) armed with a nuclear warhead.
    * True
    * False [correct]

[Category: Domestic Politics of Foreign Countries]

1. Canada elected a majority Liberal government in 2015.
   * True [correct]
   * False
2. Jose Eduardo dos Santos recently took power in Angola promising a break from the past rule of the People’s Movement for the Liberation of Angola (also known as the MPLA).
   * True
   * False [correct]
3. In 2015, Myanmar elected its first democratically chosen government in over 50 years.
   * True [correct]
   * False
4. Spain has evolved over the last 50 years from a highly centralized state to a highly decentralized state.
   * True [correct]
   * False
5. The Russian United Democratic Party is most closely associated with President Vladimir Putin.
   * True
   * False [correct]
6. In 2017 snap elections, the United Kingdom Labour Party won a majority in Parliament.
   * True
   * False [correct]
7. In Iran, the Basij is generally viewed as being in opposition to the regime.
   * True
   * False [correct]
8. The current President of South Korea is Moon Jae-in.
   * True [correct]
   * False
9. India’s liberalization reforms now allow for 100% Foreign Direct Investment (FDI) stake in ventures.
   * True [correct]
   * False
10. Jose Ramon Machado Ventura is the head of the Cuban Communist Party.
    * True
    * False [correct]

[Category: Crisis/Conflict Tracking]

1. In the dispute over Kashmir, Pakistan controls Jammu and India controls Azad Kashmir.
   * True
   * False [correct]
2. Since 2014, Kurdish Peshmerga militias have participated in the resistance against ISIS, primarily in northern Iraq.
   * True [correct]
   * False
3. Azerbaijan and Armenia have formally settled their border dispute.
   * True
   * False [correct]
4. Algeria has experienced a revolutionary overthrow of its government in the last five years.
   * True
   * False [correct]
5. In 2017, the U.S. deployed Marines with field artillery to support the assault on the ISIS held city of Raqqa, Syria.
   * True [correct]
   * False
6. Iran has ended its territorial dispute with the United Arab Emirates concerning three islands in the Persian Gulf.
   * True
   * False [correct]
7. A UN fact-finding mission confirmed that the Syrian government has utilized chemical weapons on at least 5 occasions.
   * True [correct]
   * False
8. In 2016, the International Criminal Court (ICC) ruled in favor of the Philippines and against Chinese naval aggression in the South China Sea.
   * True [correct]
   * False
9. Japan, China, and South Korea dispute sovereignty over the Senkaku Islands.
   * True
   * False [correct]
10. In the Syrian conflict, the Bashaar Al-Assad regime is largely backed by Iran, Hezbollah in Lebanon, Russia and Shia militias.
    * True [correct]
    * False

[Category: Grab Bag]

1. Mariam Al-Mansouri is the UAE's first female fighter pilot and has flown missions against ISIS militants.
   * True [correct]
   * False
2. According to UNESCO, in 2015 the Democratic People's Republic of Korea had a literacy rate of 100% for people age 15 and older.
   * True [correct]
   * False
3. Montenegro is the most recent nation to join the United Nations.
   * True
   * False [correct]
4. According to the Organization for Economic Co-operation and Development (OECD), among 25- to 34-year-olds in Japan, more women than men have a tertiary education.
   * True [correct]
   * False
5. Alibaba is the Chinese internet equivalent of Facebook.
   * True
   * False [correct]
6. Facebook Inc.'s solar powered Aquila drone is planned to deliver internet to remote regions of the earth.
   * True [correct]
   * False
7. Scientists have calculated that only 35% of the Great Barrier Reef has been "bleached" and is currently at a high state of health.
   * True
   * False [correct]
8. In March 2017, Carrie Lam became the Chief Executive of Hong Kong and is the third female executive of that territory.
   * True
   * False [correct]
9. Norway has the largest oil reserves of any Western European nation.
   * True [correct]
   * False
10. According to the Food and Agricultural Organization, over 80% of all land area in Uruguay is agricultural.
    * True [correct]
    * False

**POLITICAL KNOWLEDGE (Season 2)**

In this section, you will be shown 15 statements and asked to answer whether each statement is true or false.

We will also ask you to rate how confident you are that your answer is correct by assigning a probability between 50% and 100% to your answer. If you are completely sure that your answer is correct, you should rate your confidence as 100%. If you are only guessing, you should rate your confidence as 50%. If you think your answer may be right but are not sure, you should rate your confidence somewhere between 50% and 100%.

Do not attempt to look up the answer to any of these questions.

*Note: These questions center around current events as of mid-2017. Although this test is updated periodically, some of the questions may be outdated. If you encounter a question you believe is no longer relevant, answer based on your knowledge of the* current *state of the world at the time you are answering these questions.*

1. From 2001 to 2015, the Japanese economy has registered GDP growth rates between 8 and 12%.
   1. True
   2. False [correct]
2. Since democratization, the Indonesian economy has grown faster than it did during the Suharto dictatorship.
   1. True
   2. False [correct]
3. Permanent members of the UN Security Council include the U.S., China, Germany, France and Russia.
   1. True
   2. False [correct]
4. In 2017 snap elections, the United Kingdom Labour Party won a majority in Parliament.
   1. True
   2. False [correct]
5. Algeria has experienced a revolutionary overthrow of its government in the last five years.
   1. True
   2. False [correct]
6. Japan, China, and South Korea dispute sovereignty over the Senkaku Islands.
   1. True
   2. False [correct]
7. Montenegro is the most recent nation to join the United Nations.
   1. True
   2. False [correct]
8. In the dispute over Kashmir, Pakistan controls Jammu and India controls Azad Kashmir.
   1. True
   2. False [correct]
9. In 2014, the Ukrainian territory of Crimea was annexed by the Russian Federation.
   1. True [correct]
   2. False
10. As of 2016, the Chinese People's Liberation Army-Navy (PLAN) had built several islands in the South China Sea to project its naval power over the region.
    1. True [correct]
    2. False
11. The current President of South Korea is Moon Jae-in.
    1. True [correct]
    2. False
12. In 2015, Myanmar elected its first democratically chosen government in over 50 years.
    1. True [correct]
    2. False
13. According to the Food and Agricultural Organization, over 80% of all land area in Uruguay is agricultural.
    1. True [correct]
    2. False
14. In 2016, Turkey had a larger GDP than Switzerland.
    1. True [correct]
    2. False
15. The conservative party currently holds fewer than 100 seats in Canada’s House of Commons.
    1. True [correct]
    2. False