

Geographic Algebra

Algebra · Practice Test · 25 Questions

1. If the land area of Australia is approximately 7.7 million km² and the land area of Brazil is 8.5 million km², what is the difference in square kilometers?

- A) 0.8 million
- B) 1.2 million
- C) 0.5 million
- D) 1.5 million

2. The distance between Tokyo and Sydney is roughly 7,800 km. If a plane travels at 600 km/h, what is the travel time in hours?

- A) 10
- B) 13
- C) 15
- D) 12

3. The Nile River is approximately 6,650 km long, and the Amazon River is 6,400 km long. What is the total length of both rivers combined?

- A) 12,050 km
- B) 13,050 km
- C) 13,150 km
- D) 12,950 km

4. If a country has a population of 50 million and a land area of 500,000 km², what is the population density (people per km²)?

- A) 50
- B) 100
- C) 200
- D) 250

5. Mount Everest is 8,848 meters high and Mount K2 is 8,611 meters high. Calculate the height difference in meters.

- A) 237
- B) 337
- C) 247
- D) 227

6. If 1,000 km is approximately 621 miles, how many miles is 5,000 km?

- A) 3,105
- B) 3,005
- C) 3,205
- D) 3,115

7. The surface area of the Earth is 510 million km², and the ocean covers 361 million km². What is the land area?

- A) 149 million km²
- B) 159 million km²
- C) 169 million km²
- D) 139 million km²

8. If the time difference between two cities is 3 hours, and it is 12:00 PM in the eastern city, what time is it in the western city?

- A) 8:00 AM
- B) 9:00 AM
- C) 10:00 AM
- D) 11:00 AM

9. The world population in 2023 was roughly 8 billion. If it grows by 0.8% annually, what is the approximate increase in millions after one year?

- A) 64
- B) 80
- C) 6.4
- D) 8

10. If the average temperature in a city in January is 10°C and it increases by 2°C each month for 5 months, what is the temperature in June?

- A) 18°C
- B) 20°C
- C) 22°C
- D) 24°C

11. The Great Barrier Reef is 2,300 km long. If a boat travels 230 km per day, how many days will it take to traverse the length?

- A) 5
- B) 10
- C) 15
- D) 20

12. If the ratio of land to water in a region is 1:3 and the total area is 400 km², how many square kilometers is the land?

- A) 100
- B) 133
- C) 200
- D) 300

13. A country's GDP is \$500 billion, and its population is 20 million. What is the GDP per capita?

- A) \$20,000
- B) \$25,000
- C) \$30,000
- D) \$35,000

14. If the latitude of the Equator is 0° and the Tropic of Cancer is 23.5° N, what is the angular difference between them?

- A) 23.5°
- B) 47°
- C) 11.75°
- D) 66.5°

15. A desert covers 9 million km², which is 6% of the Earth's land area (149 million km²). Which desert is this?

- A) Gobi
- B) Sahara
- C) Arabian
- D) Kalahari

16. If a flight lasts 8 hours and covers 7,200 km, what is the average speed of the plane?

- A) 800 km/h
- B) 900 km/h
- C) 1,000 km/h
- D) 1,100 km/h

17. The Arctic Circle is at 66.5° N. What is the latitude of the Antarctic Circle?

- A) 66.5° S
- B) 23.5° S
- C) 45° S
- D) 90° S

18. If 1 hectare equals 0.01 km^2 , how many hectares are in 5 km^2 ?

- A) 50
- B) 500
- C) 5,000
- D) 50,000

19. A city has 2 million cars. If $\frac{1}{4}$ of them are electric, how many electric cars are there?

- A) 250,000
- B) 500,000
- C) 750,000
- D) 1,000,000

20. If the distance around the Equator is 40,075 km, what is the distance of a semicircle?

- A) 20,037.5 km
- B) 20,075 km
- C) 19,037.5 km
- D) 21,037.5 km

21. If a country has 500 islands and 20% are inhabited, how many islands are inhabited?

- A) 50
- B) 80
- C) 100
- D) 120

22. A mountain range extends 1,500 km. If it is mapped at a scale where $1 \text{ cm} = 50 \text{ km}$, how long is the range on the map?

- A) 20 cm
- B) 30 cm
- C) 40 cm
- D) 50 cm

23. If the depth of a trench is 10,000 meters and the height of a nearby mountain is 5,000 meters, what is the vertical span?

- A) 5,000 m
- B) 10,000 m
- C) 15,000 m
- D) 20,000 m

24. The volume of water in a lake is 500 km^3 . If 50 km^3 evaporates, what percentage of the original volume remains?

- A) 80%
- B) 85%
- C) 90%
- D) 95%

25. If a region receives 1,200 mm of rain annually, what is the average monthly rainfall in mm?

- A) 80
- B) 100
- C) 120
- D) 150