

Pre-Algebra: Nature's Numbers

Pre-Algebra · Practice Test · 19 Questions

1. The average lifespan of a giant panda is approximately 20 years in the wild. If a panda lives for 2 decades, how many years is that?

- A) 10 years
- B) 20 years
- C) 100 years
- D) 200 years

2. A mature blue whale can weigh up to 150 tonnes. If 1 tonne is equal to 1000 kilograms, what is the maximum weight of a blue whale in kilograms?

- A) 150 kg
- B) 1,500 kg
- C) 15,000 kg
- D) 150,000 kg

3. The Amazon rainforest covers approximately 5.5 million square kilometers. If a small protected area within it is 5,500 square kilometers, what fraction of the total Amazon rainforest does this area represent?

- A) $\frac{1}{10}$
- B) $\frac{1}{100}$
- C) $\frac{1}{1,000}$
- D) $\frac{1}{10,000}$

4. A typical monarch butterfly migrates up to 4,800 kilometers. If a butterfly travels at an average speed of 30 kilometers per hour, how many hours would it take to cover this distance?

- A) 16 hours
- B) 160 hours
- C) 1,600 hours
- D) 16,000 hours

5. The Great Barrier Reef is approximately 2,300 kilometers long. If a segment of the reef is 1,150 kilometers, what percentage of the total length does this segment represent?

- A) 25%
- B) 50%
- C) 75%
- D) 100%

6. A single mature oak tree can absorb about 22 kilograms of carbon dioxide per year. To absorb 440 kilograms of carbon dioxide, how many such oak trees would be needed?

- A) 10 trees
- B) 20 trees
- C) 22 trees
- D) 44 trees

7. The average speed of a cheetah is about 100 kilometers per hour. If a cheetah runs for 0.25 hours, what distance does it cover?

- A) 25 km
- B) 50 km
- C) 75 km
- D) 100 km

8. A droplet of water contains approximately 3.34×10^{21} molecules. If scientists are studying 2 droplets, how many molecules are they studying in scientific notation?

- A) 3.34×10^{21} molecules
- B) 6.68×10^{21} molecules
- C) 3.34×10^{42} molecules
- D) 6.68×10^{42} molecules

9. The population of Emperor penguins on an island is estimated to be 200,000. If the population decreases by 10%, how many penguins are lost?

- A) 2,000 penguins
- B) 10,000 penguins
- C) 20,000 penguins
- D) 180,000 penguins

10. A tidal wave can travel at speeds of up to 800 kilometers per hour. If a tidal wave travels for 3.5 hours, what distance does it cover?

- A) 280 km
- B) 560 km
- C) 2,800 km
- D) 28,000 km

11. The average depth of the ocean is about 3,688 meters. If a submersible reaches a depth of 1,844 meters, what percentage of the average ocean depth has it reached?

- A) 25%
- B) 50%
- C) 75%
- D) 100%

12. A redwood tree can grow to a height of over 100 meters. If a redwood tree has grown 75% of its potential height, how tall is it?

- A) 75 meters
- B) 80 meters
- C) 85 meters
- D) 90 meters

13. The human population is approximately 8 billion. If the wild tiger population is about 3,900, what is the ratio of humans to tigers?

- A) 1:200,000
- B) 2,000:1
- C) 200,000:1
- D) 8,000,000:1

14. A desert can experience extreme temperature fluctuations. If the daytime temperature is 45°C and the nighttime temperature is -5°C, what is the difference between the two temperatures?

- A) 40°C
- B) 45°C
- C) 50°C
- D) 55°C

15. The average rainfall in a rainforest is about 2,000 millimeters per year. If it rained 500 millimeters in one month, what fraction of the annual rainfall did it receive that month?

- A) $\frac{1}{4}$
- B) $\frac{1}{2}$
- C) $\frac{3}{4}$
- D) $\frac{1}{10}$

16. A group of wolves has a territory of 250 square kilometers. If they hunt an area that is 0.5 times their territory, how large is the hunting area?

- A) 100 sq km
- B) 125 sq km
- C) 150 sq km
- D) 200 sq km

17. The speed of light in a vacuum is approximately 299,792 kilometers per second. Rounded to the nearest thousand, what is this speed?

- A) 299,000 km/s
- B) 300,000 km/s
- C) 299,790 km/s
- D) 299,800 km/s

18. A coral polyp reproduces by budding, and a new polyp grows. If a colony starts with 5 polyps and each polyp doubles every month, how many polyps will there be after 3 months?

- A) 15 polyps
- B) 20 polyps
- C) 30 polyps
- D) 40 polyps

19. The average time it takes for plastic to decompose is estimated to be around 450 years. If a plastic bottle is buried, what is the value of 450 expressed in hundreds?

- A) 4.5
- B) 45
- C) 450
- D) 4,500