

Human Body Multiplication and Division Facts

Mathematics · Answer Key · 17 Questions

1. If a typical adult human has approximately 206 bones and an average of 32 teeth, what is the ratio of bones to teeth, rounded to two decimal places?

- A) 6.44:1
- B) 6.00:1
- C) 6.78:1
- D) 5.99:1

2. The human heart beats approximately 100,000 times per day. If a person lives to be 80 years old, and assuming this rate remains constant, how many times will their heart beat in a lifetime (80 years)? (Use 365.25 days per year for leap years).

- A) 2,920,000,000
- B) 2,920,300,000
- C) 2,922,000,000
- D) 3,010,000,000

3. An average adult human has about 5 litres of blood. If a single red blood cell has a diameter of approximately 7.8 micrometres, and assuming they are perfect spheres, how many cubic micrometres of blood volume would 10 billion red blood cells occupy? (Volume of a sphere = $\frac{4}{3} \times \pi \times r^3$, where r is the radius).

- A) 3.8×10^{12}
- B) 2.4×10^{12}
- C) 4.7×10^{12}
- D) 1.9×10^{12}

4. The human body is composed of approximately 60% water. If a person weighs 75 kg, how many litres of water are in their body? (Assume 1 litre of water weighs 1 kg).

- A) 35 litres
- B) 45 litres
- C) 50 litres
- D) 40 litres

5. The human brain uses about 20% of the body's total energy. If an adult human consumes an average of 2,000 kilocalories per day, and the brain consumes 20% of this, how many kilocalories does the brain consume daily?

- A) 300 kcal
- B) 500 kcal
- C) 400 kcal
- D) 200 kcal

6. An adult's small intestine is about 6 metres long. If the average villus (finger-like projections lining the intestine) is about 1 millimetre in height, how many villi would fit end-to-end along the entire length of the small intestine?

A) 6,000,000

B) 600,000

C) 60,000

D) 6,000

7. The human stomach can expand to hold approximately 1.5 litres of food. If the average meal consumed is 0.3 litres, how many such meals would fill the stomach to its maximum capacity?

A) 3

B) 4

C) 5

D) 6

8. The average adult has about 100,000 hairs on their head. If each hair grows about 1.25 cm per month, what is the total length of hair growth for all hairs on the head in a year (12 months)?

A) 1,500,000 cm

B) 15,000,000 cm

C) 1,250,000 cm

D) 12,500,000 cm

9. A typical human cornea has a thickness of about 0.5 millimetres. If you stacked 100 corneas on top of each other, what would be the total height in centimetres?

A) 0.05 cm

B) 0.5 cm

C) 5 cm

D) 50 cm

10. The human liver performs over 500 vital functions. If the liver weighs approximately 1.5 kg, and the average human body weight is 70 kg, what percentage of the body's weight does the liver represent?

A) 2.1%

B) 1.5%

C) 0.5%

D) 3.0%

11. A single human chromosome contains millions of base pairs. If a specific chromosome contains 160 million base pairs and it is divided into segments of 2 million base pairs each, how many segments are there?

A) 80

B) 160

C) 320

D) 40

12. The human eye can distinguish roughly 10 million different colours. If a person can distinguish 2 million colours under optimal conditions, and then their ability is reduced by half due to a specific condition, how many colours can they distinguish?

A) 500,000

B) 1,000,000

C) 2,000,000

D) 4,000,000

13. The average human lung capacity is about 6 litres. If a person takes a normal breath and inhales 0.5 litres of air, how many normal breaths are needed to fill their lungs to capacity?

A) 10

B) 12

C) 15

D) 20

14. The human body has approximately 37 trillion cells. If 1% of these cells are specialized nerve cells, how many nerve cells are there?

A) 3.7 billion

B) 370 million

C) 3.7 trillion

D) 37 billion

15. The human femur (thigh bone) is about 50 cm long. If its strength is measured as being able to withstand a force of 1.5 metric tons, and you have 3 femurs, what is the combined maximum force they could theoretically withstand?

A) 3.5 tons

B) 4.0 tons

C) 4.5 tons

D) 5.0 tons

16. The human epidermis regenerates every 28 days. If your skin is made of approximately 1.9 square metres, and it completely regenerates, how many times has it regenerated in a year (assuming 365 days)?

A) 13.04

B) 13

C) 12.5

D) 13.5

17. An adult human kidney filters about 180 litres of blood per day. If it filters this amount over 24 hours, what is the average filtration rate in litres per hour?

A) 7.5 litres/hour

B) 6.0 litres/hour

C) 9.0 litres/hour

D) 8.0 litres/hour