

1. $\lim_{n \rightarrow \infty} \left(\sqrt[n]{3^n - 2^n} \right) \cdot \frac{\cos n}{n}$ (*Tugberk Talak*)

2. $\lim_{n \rightarrow \infty} \left(1 - \frac{1}{n} \right)^n \cdot \frac{3^n - 2^n}{3^{n+1} - 2^{n+1}}$ (*Din Korganbekov*)

3. $\lim_{x \rightarrow 0} \frac{\log(1 + x^2)}{\sin x \cdot \cos(2x) \cdot \operatorname{tg} x}$ (*Anna Vakhnina*)

4. $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n^2} \right)^{n^2+1} \cdot \frac{\sqrt{n-2} - \sqrt{3n-4}}{\sqrt{5n-6} - \sqrt{7n-8}}$ (*Ryan Dutton*)

5. $\lim_{x \rightarrow 0} (\cos x)^{\cotg x}$ (*Esenbek Karymshakov*)

6. $\lim_{n \rightarrow \infty} \frac{2^n}{n!} \cdot \frac{1}{\sqrt{n-1} - \sqrt{n-2}}$ (*Jean Lacroix*)

7. $\lim_{x \rightarrow 0^+} \frac{\sqrt{x \cdot (e^{2x} - 1)}}{\ln(1 - \sin x)}$ (*Michael Bogren*)

8. $\lim_{n \rightarrow \infty} \left(1 - \frac{1}{n^2} \right)^n \cdot \frac{n}{\sqrt{n!}}$ (*Imdrit Bogu*)

9. $\lim_{x \rightarrow 0} (1 + \operatorname{arctg} x)^{\frac{1}{\sin 6x}}$ (*Victoria Stepanova*)

10. $\lim_{n \rightarrow \infty} \frac{n^e}{e^n} \cdot \left(\sqrt[3]{n^3 + 1} - \sqrt[3]{n^3 - 1} \right)$ (*Yana Bilous*)

11. $\lim_{x \rightarrow 0} (1 + \operatorname{arctg} x)^{\frac{1}{\operatorname{tg} x}}$ (*Yusif Gasimov*)

12. $\lim_{n \rightarrow \infty} \frac{7^n - 6^n}{5^n - 4^n} \cdot \left(1 + \frac{1}{3n} \right)^{2n}$ (*Anna Efros*)

13. $\lim_{x \rightarrow 0} \left(1 + \operatorname{tg} \frac{x}{2} \right)^{\frac{1}{\operatorname{arctg} x}}$ (*Hayk Bunatyan*)

14. $\lim_{n \rightarrow \infty} \frac{2^n}{n!} \cdot \frac{\sqrt[3]{n+2} - \sqrt[3]{n+3}}{\sqrt[3]{n+4} - \sqrt[3]{n+5}}$ (*Anna Fedorova*)

15. $\lim_{x \rightarrow 0} \frac{e^{1-\cos x} - \cos x}{x^2}$ (*Valeria Efimenko*)

16. $\lim_{n \rightarrow \infty} \frac{(2n)!}{n^n} \cdot n^2 \cdot \left(\sqrt[3]{n^3 + 2} - \sqrt[3]{n^3 - 2} \right)$ (*Ruyuan Liu*)

$$17. \lim_{x \rightarrow 0} \left(1 + \sin \frac{x}{2}\right)^{\frac{1}{\arctg x}} \quad (\text{Anastasia Pankina})$$

$$18. \lim_{n \rightarrow \infty} \left(\sqrt[4]{n^4 + 1} - \sqrt[4]{n^4 - 1}\right) \cdot \frac{n^{n+3}}{n!} \quad (\text{Victoria Dobryashkina})$$

$$19. \lim_{x \rightarrow 0} \left(1 + \operatorname{tg} \frac{x}{3}\right)^{\frac{1}{\arcsin x}} \quad (\text{Elza Yusufova})$$

$$20. \lim_{n \rightarrow \infty} n! \cdot \frac{3^n - 2^n}{3^{2n} - 2^{2n}} \quad (\text{Dušan Tanasković})$$

$$21. \lim_{x \rightarrow \frac{\pi}{3}} \frac{\sin(x - \frac{\pi}{3})}{1 - 2 \cos x} \quad (\text{Ran Yoon})$$

$$22. \lim_{x \rightarrow 0} e^{\frac{\sin x}{\sin(\operatorname{tg} x)}} \quad (\text{Peter Bogren})$$

$$23. \lim_{x \rightarrow 1+} \frac{\sin \sqrt{x-1} \cdot \operatorname{tg} \sqrt{x-1}}{\log x} \quad (\text{Eunyoung Shin})$$

$$24. \lim_{n \rightarrow \infty} \sqrt[n]{4^n + 3^n} \cdot n \cdot \sin \frac{1}{n} \quad (\text{Javidan Gasimov})$$

$$25. \lim_{n \rightarrow \infty} n \cdot \log \left(\frac{n+2}{n} \right)$$

$$26. \lim_{n \rightarrow \infty} n \cdot \frac{\cos \frac{1}{\sqrt{n}} - 1}{n+1}$$

$$27. \lim_{n \rightarrow \infty} (n-1) \cdot \operatorname{arctg} \frac{1}{\sqrt{n}+1} \quad (\text{Chun-Yang Chao})$$