**Варіанти завдань**

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| Варіант | Функціональна сума | Функція |
| 1 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{sin^{k}x}{k!}$$ | $f\left(x\right)=e^{sin x}$. |
| 2 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{cos^{2k}x}{2k!}(-1)^{k}$$ | $f\left(x\right)=cos⁡(cos x)$. |
| 3 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{sin^{k}(2+x)}{k!}$$ | $f\left(x\right)=e^{sin 2x}$. |
| 4 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(5+x)^{k}}{k!}$$ | $f\left(x\right)=e^{5+x}$. |
| 5 | $$S\left(x\right)=\sum\_{k=0}^{\infty }(-1)^{k}\frac{(2-x)^{2k}}{(2k)!}$$ | $f\left(x\right)=cos⁡(2-x)$. |
| 6 | $$S\left(x\right)=\sum\_{k=0}^{\infty }(-1)^{k}\frac{(2x)^{2k+1}}{(2k+1)!}$$ | $f\left(x\right)=sin2x$. |
| 7 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(\sqrt{2+x})^{2k}}{k!}$$ | $f\left(x\right)=e^{\sqrt{2+x}}$. |
| 8 | $$S\left(x\right)=\sum\_{k=0}^{\infty }(-1)^{k}\frac{(1,4x)^{2k}}{(2k)!}$$ | $f\left(x\right)=cos⁡(1,4x)$. |
| 9 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(\sqrt{2x-4})^{k}}{k!}$$ | $f\left(x\right)=e^{\sqrt{2x-4}}$. |
| 10 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(\sqrt{\left|sinx\right|})^{k}}{k!}$$ | $f\left(x\right)=e^{\sqrt{\left|sinx\right|}}$. |
| 11 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(x+1)^{k/2}}{k!}$$ | $f\left(x\right)=e^{\sqrt{x+1}}$. |
| 12 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(x^{2}+2)^{k/4}}{k!}$$ | $f\left(x\right)=e^{\sqrt[4]{x^{2}+2}}$. |
| 13 | $$S\left(x\right)=\sum\_{k=0}^{\infty }\frac{(\sqrt{3x+5})^{k}}{k!}$$ | $f\left(x\right)=e^{\sqrt{3x+5}}$. |
| 14 | $$S\left(x\right)=\sum\_{k=0}^{\infty }(-1)^{k}\frac{(\sqrt{4x+8})^{2k}}{(2k)!}$$ | $f\left(x\right)=cos⁡(\sqrt{4x+8})$. |
| 15 | $$S\left(x\right)=\sum\_{\begin{array}{c}k=\\0\end{array}}^{\infty }(-1)^{k}\frac{(\sqrt{2x+4})^{2k+1}}{(2k-1)!}$$ | $f\left(x\right)=sin⁡(\sqrt{2x+4})$. |