A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A A

1. If $y = x\sqrt{2x+5}$, then $y' =$

   (A) $\dfrac{3x+5}{\sqrt{2x+5}}$ ⟵ *(circled)*

   (B) $\dfrac{1}{\sqrt{2x+5}}$

   (C) $\dfrac{1}{2\sqrt{2x+5}}$

   (D) $\dfrac{5x+10}{2\sqrt{2x+5}}$

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2. $\displaystyle\int 2^x \, dx =$

   (A) $2^x + C$ (B) $(\ln 2)2^x + C$ (C) $\dfrac{2^x}{\ln 2} + C$ *(circled)*   (D) $\dfrac{2^{x+1}}{x+1} + C$

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3. $\lim\limits_{x \to -7} \dfrac{x+7}{|x+7|}$ is

(A) -1 (B) 0   (C) 1   (D) nonexistent

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4. $\displaystyle\int \dfrac{\left(x^{1/3} - 4\right)^5}{6x^{2/3}}\, dx =$

(A) $\dfrac{\left(x^{1/3} - 4\right)^6}{12} + C$

(B) $\dfrac{\left(x^{1/3} - 4\right)^6}{6} + C$

(C) $\dfrac{5\left(x^{1/3} - 4\right)^4}{2} + C$

(D) $3\left(x^{1/3} - 4\right)^6 + C$

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