ĐÁP ÁN TỰ LUẬN (Đề 141–142–143–144)

Câu 1: $y = x^3 + 3x^2$ — **1đ**

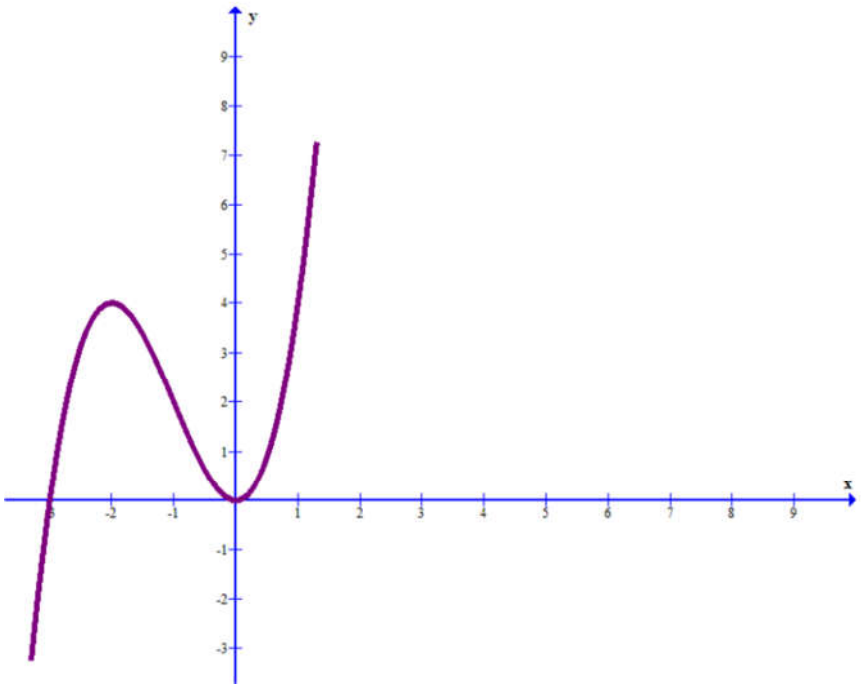
- $D = \mathbb{R}$.

- $y' = 3x^2 + 6x$; $y' = 0 \Leftrightarrow x = 0 \vee x = -2$ — 0.25

- BBT: — 0.5

x	$-\infty$		-2		0		$+\infty$
y'		$+$	0	$-$	0	$+$	
y	$-\infty$	↗	4	↘	0	↗	$+\infty$

- Đồ thị: — 0.25



Câu 2: — **1đ**

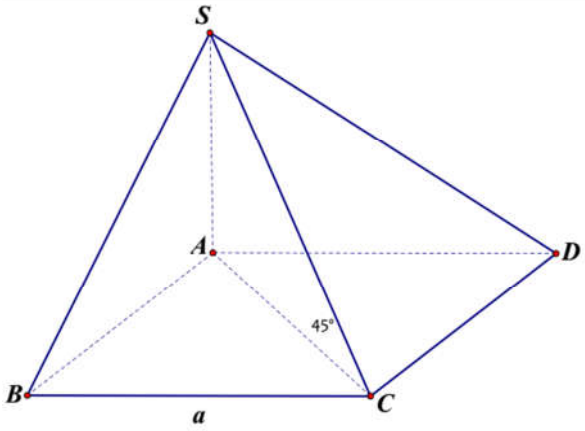
- $D = \mathbb{R} \setminus \{-2\}$.

- $y' = \dfrac{6 - 3m^2}{(3x+6)^2}$ — 0.25

- Ycbt $\Leftrightarrow y' < 0; \forall x \in D \Leftrightarrow 6 - 3m^2 < 0 \Leftrightarrow$ **$m < -\sqrt{2} \vee m > \sqrt{2}$.** — 0.25x3

Câu 3: $\left(\sqrt{2}\right)^{3x+2} = \dfrac{1}{16^{\frac{x^2}{8}}}$ (1) — **1đ**

- (1) $\Leftrightarrow 2^{\frac{3x+2}{2}}.2^{\frac{x^2}{2}} = 1 \Leftrightarrow \dfrac{x^2}{2} + \dfrac{3x+2}{2} = 0 \Leftrightarrow$ **$x = -1 \vee x = -2$.** — 0.25x4

Câu 4:	**1đ**
	
• $\widehat{SCA} = 45^o$	0.25
• $V_{S.ABCD} = \frac{1}{3} dt(ABCD).SA$	0.25
• $SA = AC = a\sqrt{2}; dt(ABCD) = a^2$	0.25
• $\boldsymbol{V_{S.ABCD} = \frac{\sqrt{2}}{3} a^3.}$	0.25

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