

**Question 1** (1 mark) ..... — / 1

1 + 1 is:

- A. 1
- B. 2
- C. 0

**Question 2** (7 marks) ..... — / 7

Let  $g: \mathbb{R} \setminus \{2\} \rightarrow \mathbb{R}$ ,  $g(x) = \frac{4}{(x-2)^2} - 1$

a) What is  $g(x)$  if:

i)  $g(x) = 0$  — / 1

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ii)  $g'(x) = 0$  — / 2

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b) Is  $g$  bijective? — / 1

- A. Yes
- B. No

c) Here's a free mark for using L<sup>A</sup>T<sub>E</sub>X! — / 1

d) What is the range of  $g$ ? — / 2

- A.  $\mathbb{R} \setminus \{2\}$
- B.  $\mathbb{R}$
- C.  $\emptyset$
- D.  $\{1, 2, 3, 4, 5\}$
- E.  $\{x: -1 < x, x \in \mathbb{R}\}$

**Question 3** (1 mark) ..... — / 1

Sketch the graph of:  $y = e^x$

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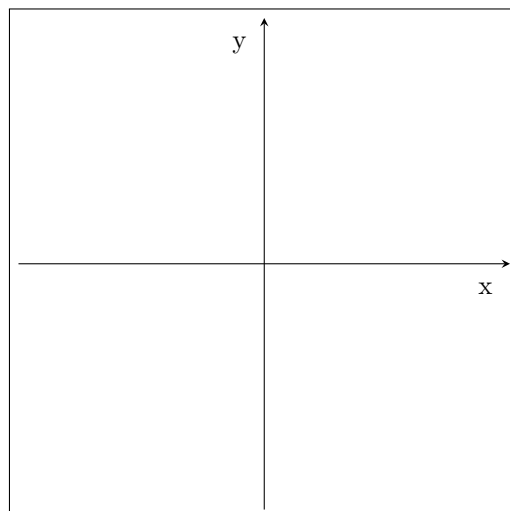
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— / 10

[illegible]