2015 **10** The diagram shows the area under the curve

$y = \dfrac{2}{x}$ from $x = 1$ to $x = d$. What value of d

makes the shaded area equal to 2?

(A) e (B) $e + 1$

(C) $2e$ (D) e^3
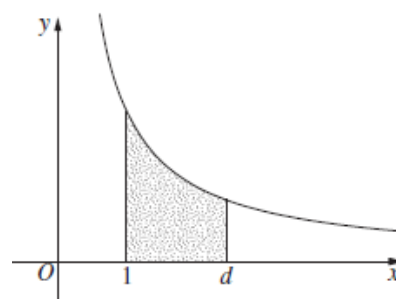
1

A

$$\int_1^d \frac{2}{x} \, dx = 2$$

$$2\int_1^d \frac{1}{x} \, dx = 2$$

$$\int_1^d \frac{1}{x} \, dx = 1$$

$$\log_e d - \log_e 1 = 1$$

$$\log_e d = 1$$

$$d = e$$

State Mean:
0.65