Solutions

Each answer shows the steps, then the **result**.

2.1

- a value inside the interval is plausible; a value outside is not supported by the data

2.2

- yes, plausible (0.5 is inside the interval)

2.3

- the data do not support that claim

3.1 B

- plausible.

3.2 B

- not supported (it is outside the interval).

3.3

(a)

- yes (the whole interval is above 0.5)

(b)

- no

(c)

- 95%

3.4

(a)

- we are 95% confident that the interval from 0.268 to 0.292 captures the true proportion of all U.S. adults who exercise every day

(b)

- if many random samples of 1,200 U.S. adults were taken, about 95% of the intervals built this way would capture the true proportion

(c)

- half the width: $\dfrac{0.292 - 0.268}{2} = \mathbf{0.012}$

(d)

- about **half** as wide: four times the sample size halves the standard error

(e)

- p is a fixed value: this interval either contains it or does not; the 95% describes the method, not one interval