

NECAP Practice Test

Grade 8

Mathematics

Non-Calculator Short-Answer Item (2 points)

6 Anna and Barb practiced serving a volleyball over the net.

- Anna served the ball over the net 18 out of 25 times.
- Barb served the ball over the net 75% of the time.

Use fractions, decimals, or percents to show or explain which girl had the greater rate of success in serving the ball over the net.

Scoring Guide

Score	Description
2	Student shows or explains that Barb was more successful using fractions, decimals, or percents.
1	Student shows some correct strategy by correctly converting a percent to a fraction or decimal or a fraction to a percent or decimal.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Sample Responses:

Answers will vary; some explanations follow.

Barb had a higher rate of success because

$$\frac{18}{25} = 72\% \text{ and } 75\% > 72\%.$$

OR

$$75\% = \frac{75}{100} \text{ and } \frac{18}{25} = \frac{72}{100} \text{ and } \frac{75}{100} > \frac{72}{100}.$$

OR

$$75\% = 0.75 \text{ and } \frac{18}{25} = 0.72 \text{ and } 0.75 > 0.72.$$

* All students were provided the same amount of space in which to write their answers. For the purposes of this document, extraneous white space was removed from each student work sample to save space.

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Sample 2-Point Response

Barb

75%

Barb had greater success because 75% of her serves went over the net.

Anna

$$\frac{18}{25} \times 4 = \frac{72}{100}$$

$$\frac{318}{4} = 72$$

72%

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Sample 1-Point Response

Barb Served a little bit better than Anna because anna got 72% over and Barb got 75% over the net.