

Question 31

Nadia is competing in a gymnastics competition. She achieves scores of 8, 7, 6.5 and 6 out of 10 in her first four routines. If she has 4 routines remaining, will Nadia be able to achieve an average score of 9 at the end of her eight routines?

Desired total $= 9 \times 8 = 72$
Current total $= 8 + 7 + 6.5 + 6 = 27.5$
She needs $72 - 27.5 = 45.5$ points
However her max score after 4 routines is
 $40 < 45.5$, \therefore not possible

- ☐ Yes, Nadia will easily achieve an average score of 9.
- ☐ Possibly, but only if Nadia achieves a perfect score in all of her remaining routines.
- ☐ No, Nadia will not be able to receive an average score of 9.
- ☐ It is still possible as she would only need 37.5 out of a possible 40 points remaining.
- ☐ There is not enough information to tell.



Correct answer:

No, Nadia will not be able to receive an average score of 9.



Hint:

Total score required = $9 \times 8 = 72$

$$72 - (8 + 7 + 6.5 + 6) = 44.5 \text{ points more}$$

Maximum for 4 routines = $4 \times 10 = 40$ points

This is impossible to achieve in 4 routines.

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