New Mmaths GCSE: S4 - Backwards Averages

Name:.. Date:..

The mean of four numbers is 8.

When a 5th number is added, the mean increases to 10.

What is the 5th number?

A 18   **B** 10

C 2   **D** 50

Correct Answer: A B C D

Explanation:

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5   3   10   ★

The above set of 4 numbers have a range of 10.

What could the mystery number under the star be?

A 15   **B** 13

C 0 or 13   **D** Any number

Correct Answer: A B C D

Explanation:

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3   5   3   7   ★

The above set of 5 numbers have a mode of 3.

What could the mystery number under the star be?

A Any number apart from 5   **B** Any number apart from 5 or 7

C Any number   **D** 3

Correct Answer: A B C D

Explanation:

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3   7   12   1   ★

The above set of 5 numbers have a median of 9.

What could the mystery number under the star be?

| A | Any number less than 12 | B | 9 |
| C | Any number between 1 and 12 | D | No possible number |

Correct Answer: A B C D

Explanation:

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The mean of six numbers is 10.

When a 7th number is added, the mean increases to 11.

What is the 7th number?

| A | 77 | B | 1 |
| C | 7 | D | 17 |

Correct Answer: A B C D

Explanation:

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5   9   1   ★

The above set of 4 numbers have a range of 8.

What could the mystery number under the star be?

| A | Any number between 1 and 9 | B | 13 |
| C | 9 | D | Any number |

Correct Answer: A B C D

Explanation:

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10   4   7   ★

The above set of 4 numbers have a mean of 8.

What could the mystery number under the star be?

| A | 21 | B | 32 |
| C | 8 | D | 11 |

Correct Answer: A B C D

Explanation:

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5   10   6   1

The above set of 5 numbers have a median of 6.

What could the mystery number under the star be?

A Any number apart from 6	**B** 6
C Any number 10 or above	**D** Any number 6 or above

Correct Answer: A B C D

Explanation:

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10   5   7

The above set of 4 numbers have a median of 6.

What could the mystery number under the star be?

A Any number between 0 and 5	**B** Any number 5 or less
C 6	**D** Any number 10 or more

Correct Answer: A B C D

Explanation:

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The mean of three numbers is 7.

When a 4th number is added, the mean decreases to 4.

What is the 4th number?

A -5	**B** 3
C -3	**D** 16

Correct Answer: A B C D

Explanation:

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