

Reasoning and Problem Solving

Cube Numbers

Developing

1a. $2^3 + 32$ is the odd one out because the answer to this is 40. The answer to the other calculations is 50.

2a. Mo is correct because when the number 5 is multiplied by itself and then by itself again, the product is 125.

3a. 1

Expected

4a. $10^3 - 350$ is the odd one out because the answer to this is 650. The answer to the other calculations is 500.

5a. Ivan is correct because when the number 12 is multiplied by itself and then by itself again, the product is 1,728.

6a. 9

Greater Depth

7a. $11^3 - 3^2$ is the odd one out because the answer to this is 1,322. The answer to the other calculations is 72.

8a. Danny is not correct because $12^3 - 12^2 = 1,584$ and no whole number can be multiplied by itself and then by itself again to reach the product 1,584. The cube number of 11 is 1,331 and the cube number of 12 is 1,728.

9a. 9

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1b. $1^3 + 90$ is the odd one out because the answer to this is 91. The answer to the other calculations is 100.

2b. Bella is correct because when the number 3 is multiplied by itself and then by itself again, the product is 27.

3b. 4

Expected

4b. $11^3 + 210$ is the odd one out because the answer to this is 1,541. The answer to the other calculations is 345.

5b. Kayleigh is not correct because no whole number can be multiplied by itself and then by itself again to reach the product 733. The cube number of 9 is 729 and the cube number of 10 is 1,000.

6b. 8

Greater Depth

7b. $9^3 + 9^2$ is the odd one out because the answer to this is 810. The answer to the other calculations is 1,712.

8b. Kiran is not correct because $8^3 + 11^2 = 633$ and no whole number can be multiplied by itself and then by itself again to reach the product 633. The cube number of 8 is 512 and the cube number of 9 is 729.

9b. 11