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| 1. Perform the operations.  ​  6 + 8 × 5  ​   |  |  |  | | --- | --- | --- | |  | a. | 49 | |  | b. | 70 | |  | c. | 46 | |  | d. | 43 | |  | e. | 40 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.07am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 2. Perform the operations.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 80 | |  | b. | 86 | |  | c. | 83 | |  | d. | 74 | |  | e. | 40 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.13am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 3. Perform the operations.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 33 | |  | b. | 39 | |  | c. | 36 | |  | d. | 37 | |  | e. | 300 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.16am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 4. What is the sum of the first 80 consecutive odd numbers?  ​   |  |  |  | | --- | --- | --- | |  | a. | 6,396 | |  | b. | 6,404 | |  | c. | 6,360 | |  | d. | 6,400 | |  | e. | 6,480 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.26am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 5. Use the following pattern and inductive reasoning to predict the answer to .  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 9 × 1 | – | 1 | = | 8 | | 9 × 21 | – | 1 | = | 188 | | 9 × 321 | – | 1 | = | 2888 | | 9 × 4321 | – | 1 | = | 38888 |   ​   |  |  |  | | --- | --- | --- | |  | a. | 5,888,889 | |  | b. | 5,888,893 | |  | c. | 5,888,883 | |  | d. | 588,888 | |  | e. | 5,888,888 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.49bm | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 6. Use the following pattern and inductive reasoning to predict the answer to .  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 123456789 | × | 9 | = | 1111111101 | | 123456789 | × | 18 | = | 2222222202 | | 123456789 | × | 27 | = | 3333333303 |   ​   |  |  |  | | --- | --- | --- | |  | a. | 1,777,777,761,600 | |  | b. | 888,888,880,788 | |  | c. | 88,888,888,080 | |  | d. | 888,888,880,806 | |  | e. | 888,888,880,800 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.50cm | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 7. Find the seven pattern.  ​   |  |  |  | | --- | --- | --- | |  | a. | 7, 5, 3, 1, 8, 7, 5, 3, 9, . . . | |  | b. | 7, 6, 4, 2, 7, 7, 5, 3, 8, . . . | |  | c. | 7, 6, 3, 2, 8, 7, 4, 3, 9, . . . | |  | d. | 7, 5, 3, 1, 8, 6, 4, 2, 9, . . . | |  | e. | 7, 5, 4, 1, 7, 6, 5, 2, 8, . . . |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.23m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 8. Use Euler circles to check the validity of the argument.  ​  All candy is fattening. All candy is delicious. Therefore, all fattening food is delicious.  ​  The argument is \_\_\_\_\_\_\_\_\_\_.  ​   |  |  |  | | --- | --- | --- | |  | a. | not valid | |  | b. | valid |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 9. Use Euler circles to check the validity of the argument.  ​  No politicians are honest. Some dishonest people are found out. Therefore, some politicians are found out.  ​  The argument is \_\_\_\_\_\_\_\_\_\_.  ​   |  |  |  | | --- | --- | --- | |  | a. | not valid | |  | b. | valid |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *OTHER:* | smnm11.01.02.32m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 10. Use Euler circles to check the validity of the argument.  ​  All lions are fierce. Some lions do not drink coffee. Therefore, some creatures that drink coffee are not fierce.  ​  The argument is \_\_\_\_\_\_\_\_\_\_.  ​   |  |  |  | | --- | --- | --- | |  | a. | not valid | |  | b. | valid |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.37m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 11. Perform the operations.  ​  ​   |  |  | | --- | --- | | *ANSWER:* | 16 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.07a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 12. Perform the operations.  ​   |  |  | | --- | --- | | *ANSWER:* | 50 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.13a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 13. Perform the operations.  ​   |  |  | | --- | --- | | *ANSWER:* | 63 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.16a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 14. What is the sum of the first 100 consecutive odd numbers?   |  |  | | --- | --- | | *ANSWER:* | 10,000 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.26a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 15. Consider the pattern:  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 9 × 1 | – | 1 | = | 8 | | 9 × 21 | – | 1 | = | 188 | | 9 × 321 | – | 1 | = | 2888 | | 9 × 4321 | – | 1 | = | 38888 |     ​  Use this pattern to find .   |  |  | | --- | --- | | *ANSWER:* | 788,888,888 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.49b | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 16. Consider the pattern:  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 123456789 | × | 9 | = | 1111111101 | | 123456789 | × | 18 | = | 2222222202 | | 123456789 | × | 27 | = | 3333333303 |   ​  Use this pattern to find .   |  |  | | --- | --- | | *ANSWER:* | 888,888,880,800 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.50c | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

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| 17. Find the first five terms of the seven pattern.   |  |  | | --- | --- | | *ANSWER:* | 7, 5, 3, 1, 8 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.02.23 | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |