|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Express the number in scientific notation and in floating-point notation.  ​  68  ​   |  |  |  | | --- | --- | --- | |  | a. | Scientific notation:  Floating point notation: 6800 05 | |  | b. | Scientific notation:  Floating point notation: 68 02 | |  | c. | Scientific notation:  Floating point notation: 0.68 07 | |  | d. | Scientific notation:  Floating point notation: 6.8 03 | |  | e. | Scientific notation:  Floating point notation: 6.8 03 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.07am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. Write the number in fixed-point notation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 804,000 | |  | b. | 8,040,000 | |  | c. | 80,400 | |  | d. | 80,400,000 | |  | e. | 8,040,000,000 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.12cm | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3. Write the number in fixed-point notation. Round your answer to 10 decimal places.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.0771604938 | |  | b. | 0.0000007716 | |  | c. | 0.0077160494 | |  | d. | 0.6666666667 | |  | e. | 0.0007716049 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.14am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. How many pages are necessary to make 1,050 copies of a manuscript that is 423 pages long? (Print on one side only.)  ​   |  |  |  | | --- | --- | --- | |  | a. | 915,850 | |  | b. | 775,850 | |  | c. | 626,650 | |  | d. | 423 | |  | e. | 444,150 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.25m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5. Compute the result. Leave your answer in scientific notation. Round your answer to 1 decimal place.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.31am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6. Compute the result. Leave your answer in scientific notation. Round your answer to 1 decimal place.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.33bm | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7. Compute the result.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.34am | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8. If it takes one second to write down each digit, how long will it take to write down all the numbers from 1 to 1,000?  ​   |  |  |  | | --- | --- | --- | |  | a. | 48 min, 13 sec. | |  | b. | 105 min, 1 sec. | |  | c. | 91 min, 3 sec. | |  | d. | 48 min | |  | e. | 83 min, 6 sec. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.55m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. Imagine that you have written down the numbers from 1 to 1,000. What is the total number of zeros you have recorded?  ​   |  |  |  | | --- | --- | --- | |  | a. | 161 | |  | b. | 71 | |  | c. | 191 | |  | d. | 192 | |  | e. | 141 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.57m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. If a country's annual production of sugar is 30,000,000 tons, estimate the number of grains of sugar produced in a year in that country. Use scientific notation. Round your answer to 4 decimal places. (*Note*: There are 2,000 lb per ton. Assume there are 2,260,000 grains in a pound of sugar.)  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.45m | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. Write the number in fixed-point notation.  ​   |  |  | | --- | --- | | *ANSWER:* | 407,000 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.12c | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. How many pages are necessary to make 1,650 copies of a manuscript that is 487 pages long? (Print on one side only.)  ​  \_\_\_\_\_\_\_\_\_\_ pages   |  |  | | --- | --- | | *ANSWER:* | 803,550 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.25 | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13. Imagine that you have written down the numbers from 1 to 300. What is the total number of zeros you have recorded?  ​  \_\_\_\_\_\_\_\_\_\_ zeros   |  |  | | --- | --- | | *ANSWER:* | 51 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.57 | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14. Write the number 2,600 in scientific notation and in floating-point notation (as on a calculator). Round your answers to 1 decimal place.  ​  Enter the number in scientific notation. \_\_\_\_\_\_\_\_\_\_  ​  The number in floating-point notation is \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | ; 2.6; 03 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.07a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15. Write the number  in fixed-point notation. Write your answer as a circulating fraction. Round your answer to 3 decimal places.   |  |  | | --- | --- | | *ANSWER:* |  | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *OTHER:* | smnm11.01.03.14a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16. Compute the result. Leave your answer in scientific notation. Round your answer to 1 decimal place.  ​   |  |  | | --- | --- | | *ANSWER:* |  | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.31a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17. Compute the result. Leave your answer in scientific notation.  ​   |  |  | | --- | --- | | *ANSWER:* |  | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.33b | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18. Compute the result. Leave your answer in scientific notation.  ​   |  |  | | --- | --- | | *ANSWER:* |  | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *OTHER:* | smnm11.01.03.34a | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19. If it takes one second to write down each digit, how long will it take to write down all the numbers from 1 to 1,100?  ​  It takes \_\_\_\_\_\_\_\_\_\_ min, \_\_\_\_\_\_\_\_\_\_ sec.   |  |  | | --- | --- | | *ANSWER:* | 54; 53 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.55 | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20. If a country's annual production of sugar is 39,000,000 tons, estimate the number of grains of sugar produced in a year in that country. Use scientific notation. Round your answer to 4 decimal places. (*Note*: There are 2,000 lb per ton. Assume there are 2,260,000 grains in a pound of sugar.)   |  |  | | --- | --- | | *ANSWER:* |  | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *OTHER:* | smnm11.01.03.45 | | *DATE CREATED:* | 12/24/2015 12:57 PM | | *DATE MODIFIED:* | 12/24/2015 12:57 PM | |