

Science 10 – Significant Figures and Scientific Notation

Mark /30

Name \_\_\_\_\_

Part A – How many significant figures are there in each of the following measurements?

- |                |       |                |       |
|----------------|-------|----------------|-------|
| 1. 250.01 M    | _____ | 6. 0.000120 kg | _____ |
| 2. 1.678 X 10  | _____ | 7. 450.0 L     | _____ |
| 3. 8 X 10      | _____ | 8. 325,444 g   | _____ |
| 4. 1.000001 mm | _____ | 9. 400 J       | _____ |
| 5. 0.098 cm    | _____ | 10. 1.0 M      | _____ |

Part B – convert the following measurements to scientific notation. The number of desired significant figures is in parentheses.

- |                 |     |       |
|-----------------|-----|-------|
| 1. 544.2 km     | (3) | _____ |
| 2. 0.00977 L    | (2) | _____ |
| 3. 67,467,978 m | (5) | _____ |
| 4. 132.3 km     | (2) | _____ |
| 5. 0,03000 L    | (3) | _____ |
| 6. 588,922 g    | (1) | _____ |
| 7. 588,922 g    | (3) | _____ |
| 8. 761 ml       | (2) | _____ |
| 9. 321.99 mm    | (4) | _____ |
| 10. 675.33 s    | (3) | _____ |

Part C – Complete the following calculations showing the correct number of significant figures in your answer:

- |                   |       |
|-------------------|-------|
| 1. 724.2 + 35.551 | _____ |
| 2. 543.3 – 1.0009 | _____ |

Part D – Express the answer in proper scientific notation form: *(if necessary)*

- |                 |       |
|-----------------|-------|
| 1. 754 X 8.1    | _____ |
| 2. 9360/3.00    | _____ |
| 3. 14,500 X 6.0 | _____ |
| 4. 317.265/1.3  | _____ |
| 5. 6889 X 1.005 | _____ |
| 6. 17.9/4.2     | _____ |
| 7. 7489.2 X 61  | _____ |
| 8. 4.0 X 1216.2 | _____ |