**Worksheet #6**

**Name: Period: Seat#:**

**State the number of significant digits in each measurement.**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 2804 m
 | 1. 2.84 km
 | 1. 5.029 m
 | 1. 0.003068 m
 |
| 1. 4.6 x 105 m
 | 1. 4.06 x 10-5 m
 | 1. 75,000 m
 | 1. 750 m
 |
| 1. 75 m
 | 1. 75.00 m
 | 1. 75,000.0 m
 | 1. 10 cm
 |

**Round the following numbers as indicated:**

To four figures:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. 3.682417
 | 1. 21.860051
 | 1. 375.6523
 | 1. 112.511
 | 1. 45.4673
 |

To one decimal place:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. 1.3511
 | 1. 2.473
 | 1. 5.687524
 | 1. 7.555
 | 1. 8.235
 |

To two decimal places:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. 22.494
 | 1. 79.2588
 | 1. 0.03062
 | 1. 3.4125
 | 1. 41.86632
 |

**Solve the following problems and report answers with appropriate number of significant digits**.

|  |  |
| --- | --- |
| 1. 6.201 cm + 7.4 cm + 0.68 cm +12.0 cm =
 | 1. 1.6 km + 1.62 m +1200 cm =
 |
| 1. 8.264 g - 7.8 g =
 | 1. 10.4168 m - 6.0 m =
 |
| 1. 1.31 cm x 2.3 cm =
 | 1. 5.7621 m x 6.201 m =
 |
| 1. 20.2 cm / 7.41 s =
 | 1. 12.00 kg + 15.001 kg =
 |

 **Express the following numbers in scientific notational form**:

|  |  |  |
| --- | --- | --- |
| 1. 123,876.3
 | 1. 1,236,840
 | 1. 422000
 |
| 1. 0.000000000000211
 | 1. 0.000238
 | 1. 0.0000205
 |

**Solve the sums or differences of the following with correct sig figs**:

|  |  |
| --- | --- |
| 1. (8.41 x 104) + (9.71 x 104) =
 | 1. (5.11 x 102) - (4.2 x 102) =
 |
| 1. (8.2 x 103) + (4.0 x 103) =
 | 1. (6.3 x 10-2) - (2.1 x 10-2) =
 |

**Solve the product and the quotients of the following with correct sig figs**:

|  |  |
| --- | --- |
| 1. (3.56 x 105) (4.21 x 106) =
 | 1. (2 x 107) (8 x 10-9) =
 |
| 1. (4.11 x 10-6) (7.51 x 10-4) =
 | 1. 8.45 x 107 / 6.74 x 103 =
 |
| 1. 9.7 x 108 / 8.6 x 10-2 =
 | 1. 4.7 x 10-2 / 5.7 x 10-6 =
 |