

Practice Worksheet for Significant Figures

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

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|--|-----------------------------|
| 1) 2804 m _____ | 7) 750 m _____ |
| 2) 2.84 km _____ | 8) 75 m _____ |
| 3) 5.029 m _____ | 9) 75,000 m _____ |
| 4) 0.003068 m _____ | 10) 75.00 m _____ |
| 5) 4.6×10^5 m _____ | 11) 75,000.0 m _____ |
| 6) 4.06×10^{-5} m _____ | 12) 10 cm _____ |

2. Solve the following problems and report answers with appropriate number of significant digits, using scientific notation.

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|--|-------|
| 1) $6.201 \text{ cm} + 7.4 \text{ cm} + 0.68 \text{ cm} + 12.0 \text{ cm} =$ | _____ |
| 2) $1.6 \text{ km} + 1.62 \text{ m} + 1200 \text{ cm} =$ | _____ |
| 3) $8.264 \text{ g} - 7.8 \text{ g} =$ | _____ |
| 4) $10.4168 \text{ m} - 6.0 \text{ m} =$ | _____ |
| 5) $12.00 \text{ m} + 15.001 \text{ kg} =$ | _____ |
| 6) $1.31 \text{ cm} \times 2.3 \text{ cm} =$ | _____ |
| 7) $5.7621 \text{ m} \times 6.201 \text{ m} =$ | _____ |
| 8) $20.2 \text{ cm} / 7.41 \text{ s} =$ | _____ |
| 9) $40.002 \text{ g} / 13.000005 \text{ g} =$ | _____ |

3. Express the following numbers in their equivalent standard notational form:

- | | |
|-----------------------------|-------|
| 1) 123,876.3 | _____ |
| 2) 1,236,840 | _____ |
| 3) 422000 | _____ |
| 4) 0.000000000000211 | _____ |
| 5) 0.000238 | _____ |
| 6) 0.0000205 | _____ |

4. Identify the sums or differences of the following:

1) $(8.41 \times 10^4) + (9.71 \times 10^4) =$ _____

2) $(5.11 \times 10^2) - (4.2 \times 10^2) =$ _____

3) $(8.2 \times 10^3) + (4.0 \times 10^3) =$ _____

4) $(6.3 \times 10^{-2}) - (2.1 \times 10^{-2}) =$ _____

5. Express the product and the quotients of the following:

1) $(3.56 \times 10^5) (4.21 \times 10^6) =$ _____

2) $(2 \times 10^7) (8 \times 10^{-9}) =$ _____

3) $(4.11 \times 10^{-6}) (7.51 \times 10^{-4}) =$ _____

4) $8.45 \times 10^7 / 6.74 \times 10^3 =$ _____

5) $9.7 \times 10^8 / 8.6 \times 10^{-2} =$ _____

6) $4.7 \times 10^{-2} / 5.7 \times 10^{-6} =$ _____