

Name: _____

Date: _____

Significant Figures in Measurements and Calculations Worksheet

1. Determine the number of significant figures in each of the following measurements:

- | | |
|----------------------------|------------------------------|
| a. 14.35 g | ii. 2000 cm |
| b. 0.0070 kg | iii. 20000 cm |
| c. 100.000 | iv. 1.00 x 10 ³ g |
| d. 1.000 x 10 ³ | v. 1.00 x 10 ³ g |
| e. 0.0070 g | vi. 0.00700 g |
| f. 0.0070 g | vii. 0.007000 g |
| g. 0.00700 g | viii. 0.0070000 g |
| h. 0.007000 g | ix. 1.00 x 10 ³ g |
| i. 100.00 | x. 1.000 x 10 ³ g |

2. Add the following measurements and express the answer with the correct number of significant figures:

- | |
|---|
| ii. 10.000 cm + 1.0000 cm |
| iii. 0.0010 g + 0.001000 g + 0.0010000 g |
| iv. 1.000 g + 0.0010 g + 0.001000 g + 0.0010000 g |
| v. 0.0010000 g + 0.00100000 g + 0.001000000 g + 0.0010000000 g |
| vi. 0.0010 g + 0.00100 g + 0.001000 g + 0.0010000 g |
| vii. 0.0010000 g + 0.00100000 g + 0.001000000 g + 0.0010000000 g |
| viii. 1.00 x 10 ³ g + 1.000 x 10 ³ g + 1.0000 x 10 ³ g |
| ix. 1.0000000 g + 1.00000000 g + 1.000000000 g + 1.0000000000 g |
| x. 1.00 x 10 ³ g + 1.000 x 10 ³ g + 1.0000 x 10 ³ g |

3. Subtract the following measurements and express the answer with the correct number of significant figures:

- | | |
|-------------------------------------|--|
| ii. 10.0000 cm - 0.0010000 cm | vi. 0.0010 g - 0.00100 g |
| iii. 0.0010 g - 0.00100 g | vii. 0.00100000 g - 0.001000000 g |
| iv. 0.00100000 g - 0.001000000 g | viii. 0.0010000000 g - 0.00100000000 g |
| v. 0.0010000000 g - 0.00100000000 g | |

4. Multiply the following:

- | | |
|---|---|
| ii. 10.000 x 0.0010000 | vi. 1.00 x 10 ³ x 1.000 x 10 ³ |
| iii. 0.0010000 x 0.0010000 | vii. 0.00100000 x 0.001000000 |
| iv. 0.00100000 x 0.00100000 | viii. 0.001000000 x 0.0010000000 |
| v. 0.001000000 x 0.001000000 | ix. 1.00 x 10 ³ x 1.000 x 10 ³ |
| vi. 1.00 x 10 ³ x 1.000 x 10 ³ | x. 1.0000 x 10 ³ x 1.00000 x 10 ³ |
| vii. 1.0000 x 10 ³ x 1.00000 x 10 ³ | |
| viii. 1.00000 x 10 ³ x 1.000000 x 10 ³ | |
| ix. 1.000000 x 10 ³ x 1.0000000 x 10 ³ | |
| x. 1.0000000 x 10 ³ x 1.00000000 x 10 ³ | |

5. Divide the following measurements and express the answer with the correct number of significant figures:

- | | |
|--------------------------------|-----------------------------------|
| ii. 10.0000 / 0.0010000 | vi. 0.0010000 / 0.0010000 |
| iii. 0.00100000 / 0.00100000 | vii. 0.001000000 / 0.001000000 |
| iv. 0.001000000 / 0.001000000 | viii. 0.0010000000 / 0.0010000000 |
| v. 0.0010000000 / 0.0010000000 | |