

1. State the number of significant digits in each of the following:

2.50 cm	<u>3</u>	3.060 in	<u>4</u>
150 ft	<u>2</u>	101500 yd	<u>4</u>
83.120 g	<u>5</u>	0.707 s	<u>3</u>
558.101 kg	<u>6</u>	8540 cm	<u>3</u>

2. Round of each of the following numbers to **three** significant digits:

10.505 cm	<u>10.5 cm</u>	558.601 kg	<u>559 kg</u>
61.15 g	<u>61.2 g</u>	14.68 s	<u>14.7 s</u>
6547.25 g	<u>6550 g</u>	0.70549 mL	<u>0.705 mL</u>
0.005486 m	<u>0.00549 m</u>	149.02 lb	<u>149 lb</u>

3. Convert the following numbers into scientific notation with **three** significant digits:

0.00005248	<u>5.25×10^{-5}</u>	120301235	<u>1.20×10^8</u>
0.00124987	<u>1.25×10^{-3}</u>	0.000000125	<u>1.25×10^{-7}</u>
9854267000	<u>9.85×10^9</u>	4569830000	<u>4.57×10^9</u>

4. Add or subtract the following measurements, giving the correct number of significant digits in your answer:

31.15 cm + 41.000 cm =	<u>72.15 cm</u>	0.35 g + 0.01258 g =	<u>0.35 g</u>
242.167 s – 175 s =	<u>67 s</u>	10.0 mL – 0.247 mL =	<u>9.8 mL</u>
152.0 kg + 4589.11 kg =	<u>4741.1 kg</u>	52.69 cm – 0.5339 cm =	<u>52.16 cm</u>

5. Multiply or divide the following measurements, giving the correct number of significant digits in your answer:

5.1 cm x 3.65 cm x 9.40 cm =	<u>170 cm³</u>	66.3 g / 7.521 mL =	<u>8.82 g/mL</u>
21.1 cm x 20 cm =	<u>400 cm²</u>	131.78 m / 19.25 s =	<u>6.846 m/s</u>
12.0 cm ³ / 0.1464 cm =	<u>82.0 cm²</u>	8.76 s x 9.6 s =	<u>84 s²</u>