

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

- a) 0.003068 m _____ b) 75.00 m _____ c) 5.029 m _____ d) 750 m _____

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

1) $6.201 \text{ cm} + 7.4 \text{ cm} + 0.68 \text{ cm} + 12.0 \text{ cm} =$ _____

4) $10.4168 \text{ m} - 6.0 \text{ m} =$ _____

5) $12.00 \text{ m} + 15.001 \text{ kg} =$ _____

6) $1.31 \text{ cm} \times 2.3 \text{ cm} =$ _____

8) $20.2 \text{ cm} / 7.41 \text{ s} =$ _____

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

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

3. Use Dimensional Analysis to solve the following - SHOW YOUR WORK! BE NEAT!

1. 87 yds = _____ cm

2. 1kg = _____ ounces

3. 66 gal = _____ Liter

4. 87 mm = _____ cm

5. 56 m = _____ ft

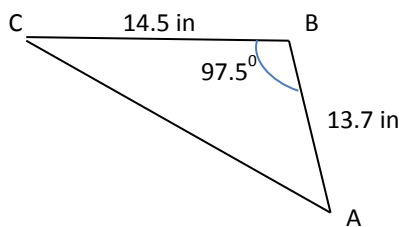
6. 78 Kg = _____ slugs

4. In the questions below, draw and solve each question.

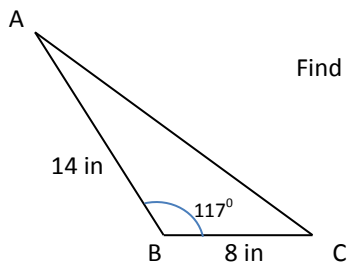
1) A lift chair at a ski resort has an angle of elevation of 31° and covers a total distance of 3575 feet. What is the vertical distance covered by the lift chair? **DRAW A PICTURE!**

2) You are preparing to land an airplane. Your straight line approach has an angle of depression of 5° . What is the straight line distance to the runway when the plane is at an altitude of 1000 feet? **DRAW A PICTURE!**

5. Solve each of the triangles below using the law of cosines and/or law of sines.



Find $m \angle C$



Find \overline{AC}