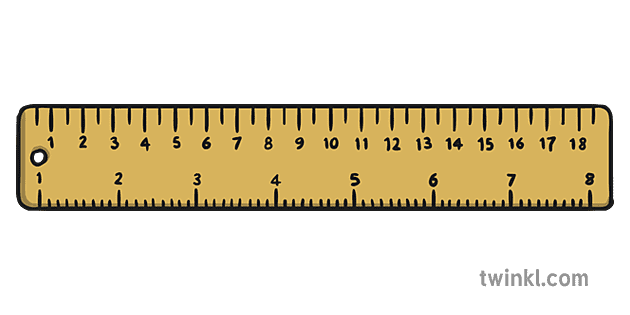
**Honors Quiz: SI Units, Conversions, and Sig Figs**

1. How many sig figs do the following numbers have, and what decimal place can we assume they have been rounded to? (1 pt each blank)

|  |  |  |
| --- | --- | --- |
| Measured value | Number of sig figs | Rounded to \_\_\_\_\_ |
| 0.904 grams |  |  |
| 38.00 grams |  |  |
| 410 grams |  |  |
| 4.3 x 104 grams |  |  |

1. Why is it important to make measurements using the correct number of significant figures? (5 pts)
2. Assuming the ruler below is correct, how wide is your thumb (in centimeters – the top markings)? (2 pt)



1. Convert 340 cm to kilometers. (5 pt)
2. Convert 45 inches to centimeters. There are 2.54 cm in 1 inch. (3 pt)
3. Why are there infinite significant figures in “counting numbers”? As an example, why would we say that the measurement “43 apples” has an infinite number of significant figures? (5 pt)