La Scuola d'Italia / Huson / Physics   First & last name:
20 October 2025   Grade:

1.3 Homework: Precision, Scientific notation, Significant figures

1. Round each value to three sig figs.

   When we round a calculated value, copy the calculator display followed by three dots, then round:
   $$\pi = 3.1415926\ldots \approx 3.14$$

   (a) 2,746,984   (c) 8,804,190

      (population of Rome)   (population of New York City)

   (b) $\sqrt{2}$ (d) e

2. Write down the number of significant digits in each value.

   (a) 8   (c) 60   (e) 105.5

   (b) 27   (d) 120   (f) 1.7320

3. Calculate and write as scientific notation, rounding to three sig figs.

   (a) $22.5 \times 14^2 - 665$ (b) The mean distance of the earth to the moon: 384,400 kilometers.

4. The Earth's mass is 5.972×10^{24} kg and the moon's mass is 7.348×10^{22} kg. What is the ratio of the Earth's mass to the moon's mass? Round to three significant figures.