

CHM 130: Chapter 2 Blackboard Homework

- 150.0 m has _____ significant figures.
- 0.200 cm has _____ significant figures.
- 6.02×10^{23} atoms has _____ significant figures.
- Round 325.6220 to 3 significant figures.
- Round 1.47890 to 4 significant figures.
- Round 7.61780 to 2 significant figures.
- $2.00 \text{ g} + 3.1 \text{ g} + 4.175 \text{ g} = \underline{\hspace{2cm}}$
- $12.500 \text{ g} + 1.230 \text{ g} + 0.180 \text{ g} = \underline{\hspace{2cm}}$
- $35.450 \text{ g} - 7.55 \text{ g} = \underline{\hspace{2cm}} \text{ g}$
- $1.675 \text{ m} \times 7.24 \text{ m} = \underline{\hspace{2cm}} \text{ m}^2$
- $3.182 \text{ cm} \times 9.2610 \text{ cm} \times 5.26 \text{ cm} = \underline{\hspace{2cm}} \text{ cm}^3$
- $\frac{1.675 \text{ g}}{2.63 \text{ mL}} = \underline{\hspace{2cm}}$
- $\frac{1148 \text{ m}}{60.0 \text{ s}} = \underline{\hspace{2cm}} \text{ m/s}$
- Check all the following that are exact: a) 25 pennies; b) 25 mm; c) 25 students; d) 25 lbs; e) 25 miles; f) 25 rulers
- Check all of the following that are exact: a) 1 kg = 2.20 lb; b) 1 mile = 1.61 km; c) 1 week = 7 days; d) 12 inches = 1 foot
- Check all of the following that are exact: a) 1 min = 60 s; b) 1 lb = 454 g; c) 1 mile = 5280 feet; d) 1 m = 100 cm
- If a student's coin collection contains 5 pennies, 5 nickels, 10 dimes, and 10 quarters, what percentage of the collection is pennies? Express your answer to 3 significant figures.
- A sample of table salt contains 1.967 g of sodium and 3.033 g of chlorine. What percentage of the sample is sodium?
- A sample of rust contains 3.32 g of iron and 1.43 g oxygen. What percentage of the sample is iron?
- Air is 20.9% oxygen by volume. How many mL of air contains 175 mL of oxygen?
- Water is 11.2% hydrogen by mass. What mass of hydrogen is present in 50.0 g of water?
- How many seconds are in 24 hours?
- The distance from the Earth to the moon is 2.39×10^5 miles. How many inches is this? (1 mile = 5280 feet)
- If a car travels at 55 miles per hour, what is its speed in feet per minute? (1 mile = 5280 feet)
- The annual rainfall in Seattle is about 36 inches. If the rain fell steadily over the course of a year, what is the daily rainfall in centimeters. (1 in = 2.54 cm exactly)