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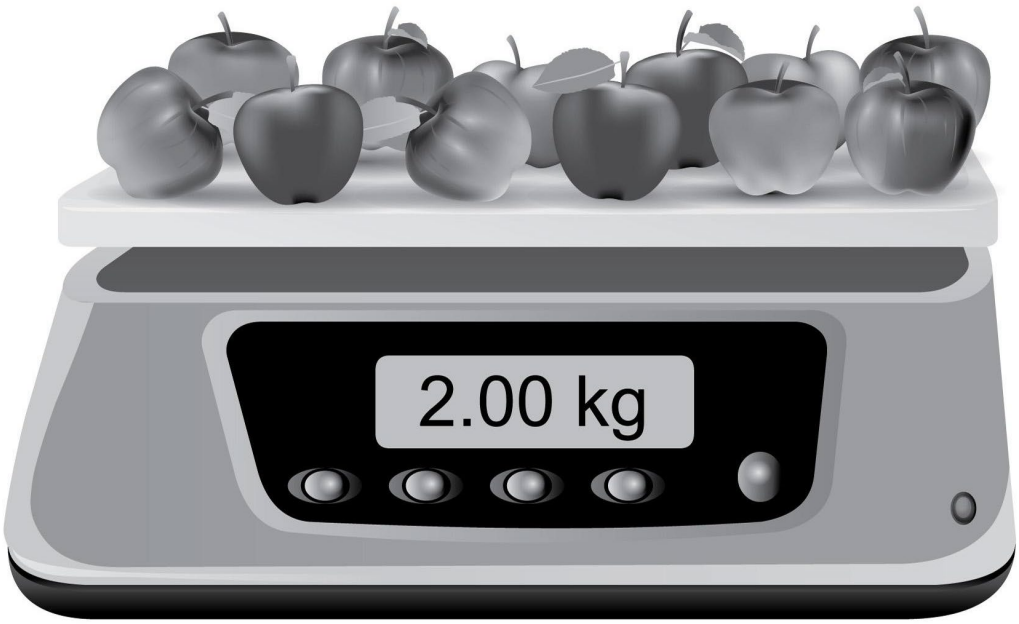
QUIZ

The Mole Concept

1. A local orchard sells bags of red apples by the dozen. The packaging department of the orchard determines the mass of each dozen batch of red apples before bagging them. The bag is then labeled with the mass of the apples. Observe the mass of the dozen red apples shown on the scale.



Mass

1 dozen apples = 2.0 kg

Based upon this mass, what would the mass of 7 red apples be in kilograms? Assume that each of the dozen apples on the scale has the same mass. Answer is rounded to one place after the decimal. 0.5 kg

A. 1.2 kg
B. 2.0 kg
C. 42.0 kg

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2. Which of the following statements related to a mole are **true**? Select all that apply.

A. A mole is used to simplify the counting of atoms.

B. Representative particles can only be atoms.

C. A mole is used to balance chemical equations.

D. A mole is used to simplify the counting of electrons.

E. Representative particles can be atoms, molecules, or formula units.

F. The number of representative particles in a mole (6.02×10^{23}) is called Avogadro's number.

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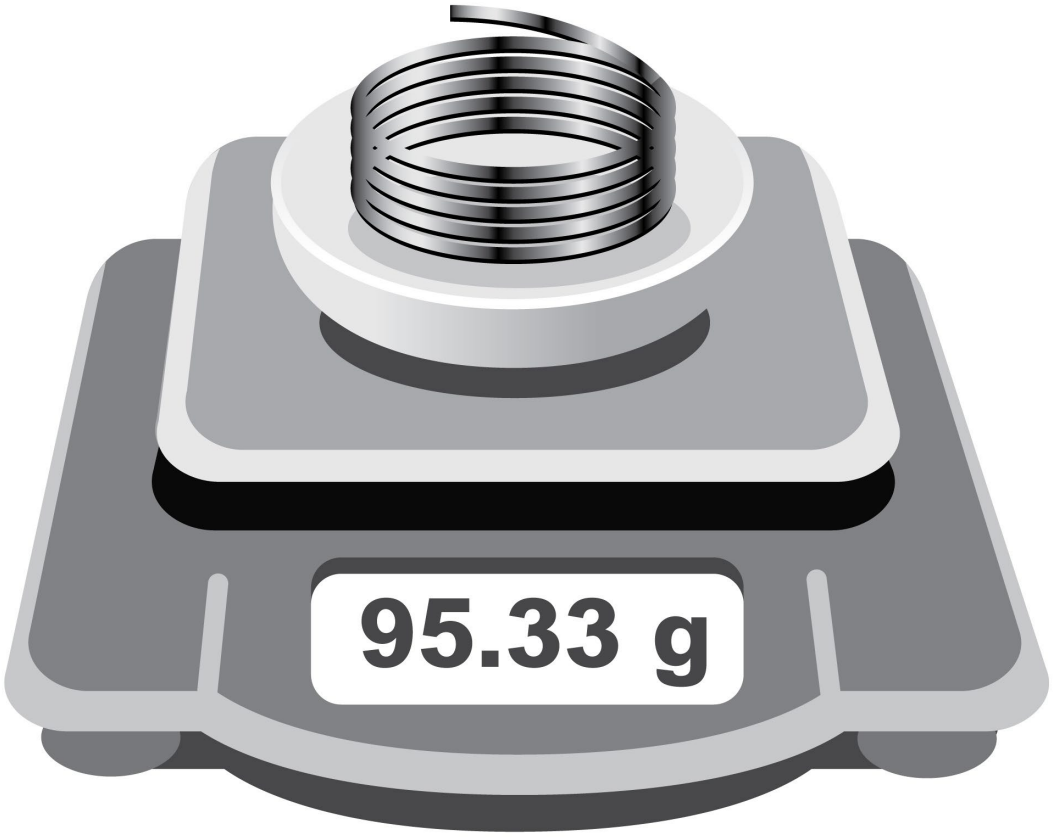
3. How many moles of copper are there in the copper sample shown?



A. 1.5 mol

B. 29 mol

C. 95.33 mol

D. 6.02×10^{23} mol

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4. Select the answer that shows the words in the correct order to complete the passage.

The formula for methane is CH_4. In 3 moles of CH_4, there are _____ moles of C and _____ moles of H.

A. one; four
B. two; eight
C. three; twelve
D. four; sixteen

5. An aluminum can has a mass of 15.8 grams. How many aluminum atoms are in this can?

A. 15.8 atoms

B. 26.98 atoms

C. 2.47×10^{26} atoms

D. 3.53×10^{23} atoms