

Answer on Question#76022 – Chemistry – Other

Question: A mole of elephants would weigh how much more than the moon?

Solution:

One mole of elephants contains 6.02×10^{23} elephants.

One Asian elephant have weight about 4000 kg.

$$6.02 \times 10^{23} \times 4000 \text{ kg} = 2.41 \times 10^{27} \text{ kg}$$

Mass of the Moon is 7.32×10^{22} kg

$$\frac{m(\text{mole of elephants})}{m(\text{Moon})} = \frac{2.41 \times 10^{27} \text{ kg}}{7.32 \times 10^{22} \text{ kg}} = 3.29 \times 10^4$$

Answer: a mole of elephants is 3.29×10^4 times much more than the Moon.

Answer provided by AssignmentExpert.com