Answers to Worksheets

Student Guide #1

1. 1 x 10 X 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10x 10 x 10 x 10 or 1 X 10^{21}
2. 1988 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 kg or 1988 X 10^{27} kg or 1.988 X 10^{30} kg
3. 75 X 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 or 75 X 10^{17} or 7.5 X 10^{18}
4. 8 X 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 meters or 8 X 10^{-8} meters
5. 79 x 1/10 x 1/10 x 1/10 x 1/10 meters or 79 X 10^{-4} meters or 7.9 X 10^{-3} meters
6. 1 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 x 1/10 meters or 1 X 10^{-10} meters
7. 20 x 1/10 meters or 20x10^{-19}

Student Guide #2

1. Oak branch with leaves, Part of the Earth's orbit and individual leaf cells
2. 1977 and Kees Boeke's book *Cosmic View: The Universe in Forty Jumps*
3. Answer will vary
4. Width-45 feet; height 11 feet; thickness– 41 feet; total weight 3125 tons, height stacked 987 miles
5. Scanning Electron Microscope
6. 1 meter or 10 centimeters
7. Answers will vary

Student Guide #3 Scientific Prefixes

1. tera (T)
2. Hector (h)
3. Centi (c)
4. Micro (µ)

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