

NASC 103 Physical Science Unit Conversion Practice

Convert the following using conversion factors from the inside front cover of the textbook. Answers are given below.

1. How many cm are in 36 inches?
2. A 60 W light bulb uses how many Btu/hr?
3. 4500 therms of natural gas corresponds to how many Btu?
4. A 3.48×10^6 square feet field is how many acres?
5. A 10 MW power plant produces how many kW of power? How many W? How many hp?
6. A 2 liter bottle of pop is how many gallons?
7. The average distance from the earth to the sun is 1.5×10^{11} meters. How many feet is this? How many miles?
8. 99.7 QBtu is how many Joules of energy?
9. 61 bbl of crude oil corresponds to how many gallons of oil? How many liters?
10. How many seconds are in a day? How many seconds are in a century?

Answers: 1) 91.4 cm, 2) 205 Btu/hr, 3) 4.5×10^8 Btu, 4) 80 acres, 5) 10,000 kW = 1×10^7 W = 1.34×10^4 hp, 6) 0.515 gal, 7) 4.92×10^{11} ft = 9.3×10^7 mi = 93 M mi, 8) 1.05×10^{20} J, 9) 2560 gal = 2.56×10^3 gal = 9.7×10^3 L, 10) 1 day = 8.64×10^4 s, 1 century = 3.16×10^8 s