

Name:

Date:

Class:

Elemental Conductivity Math Worksheet Answers

The table below lists some familiar metals and gives their conductivities.

Metal	Conductivity X 10^5 (Ω cm) ⁻¹
Aluminum, Al	3.65
Calcium, Ca	2.78
Copper, Cu	5.88
Gold, Au	4.55
Iron, Fe	1.02
Lead, Pb	0.48
Magnesium, Mg	2.33
Manganese, Mn	0.072
Mercury, Hg	0.10
Molybdenum, Mo	1.89
Nickel, Ni	1.43
Platinum, Pt	0.96
Plutonium, Pu	0.070
Silver, Ag	6.21
Sodium, Na	2.11
Tin, Sn	0.91
Titanium, Ti	0.23
Tungsten, W	1.89
Uranium, U	0.39
Zinc, Zn	1.69

1. Which of the metals listed above is the worst conductor? What is its conductivity?
Plutonium, Pu (0.070×10^5)
2. Which of the metals listed above is the best conductor? What is its conductivity?
Silver, Ag (6.21×10^5)
3. List below the six best conductors from the table in order from the metal with the lowest conductivity to the metal with the highest conductivity.
Magnesium, Mg (2.33×10^5), Calcium, Ca (2.78×10^5), Aluminum, Al (3.65×10^5), Gold, Au (4.55×10^5), Copper, Cu (5.88×10^5), Silver, Ag (6.21×10^5)
4. What is the mode of the conductivity data?
1.89

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5. In the space below, draw a bar graph showing the conductivities for all the metals with a conductivity greater than $1 \times 10^5 (\Omega \text{ cm})^{-1}$.

