



“IS TO” CHALLENGE

Let's see what you know about minerals. This "Is To" challenge is a comparison challenge. You are challenged to figure out what the first two compared minerals have in common and then you complete the second comparison based on the comparison made in the first. Maybe an example is easier to understand:

Amethyst is to Quartz as Aquamarine is to _____.
(The answer is Beryl. Amethyst is a variety of the mineral quartz. Aquamarine is a variety of the mineral beryl.)

Galena is to Pyrite as Siderite is to _____.
Why? _____

Hematite is to iron as Malachite is to _____.
Why? _____

Calcite is to Aragonite as Kyanite is to _____.
Why? _____

Muscovite is to Mica as Emerald is to _____.
Why? _____

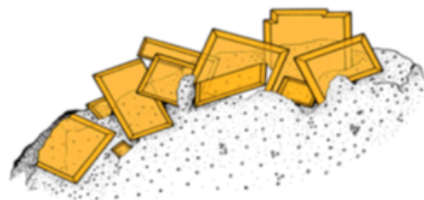
Gold is to Silver as Copper is to _____.
Why? _____

Fluorite is to Calcite as Topaz is to _____.
Why? _____

Quartz is to Tourmaline as Native Copper is to _____.
Why? _____

Smoky Quartz is to Milky Quartz as Amethyst is to _____.
Why? _____

Almandine is to Garnet as Elbaite is to _____.
Why? _____



ANSWERS

ONLY LOOK HERE IF YOU ABSOLUTELY HAVE TO!

"IS TO" CHALLENGE

Galena is to Pyrite as Siderite is to Calcite (or rhodochrosite).

Why? Galena and Pyrite form cubic crystals. Siderite, calcite and rhodochrosite form rhombohedra.

Hematite is to iron as Malachite is to Copper.

Why? Hematite is an ore of iron. Malachite is an ore of copper.

Calcite is to Aragonite as Kyanite is to Andalusite or Sillimanite.

Why? Calcite and Aragonite have the same chemical formula. Kyanite, andalusite and sillimanite also have the same chemical formula.

Muscovite is to Mica as Emerald is to Beryl.

Why? Muscovite is a variety of mica. Emerald is a variety of Beryl.

Gold is to Silver as Copper is to Platinum.

Why? All of these minerals are native elements. All crystallize in the cubic system. All have metallic luster.

Fluorite is to Calcite as Topaz is to Quartz.

Why? Fluorite is harder by 1 on the hardness scale. Topaz is harder by 1 than quartz on the hardness scale.

Quartz is to Tourmaline as Native Copper is to gold, silver, platinum, galena, etc.

Why? Quartz and tourmaline have glassy luster. Copper, gold, silver, platinum, galena and more have metallic luster. There are other possibilities. Tourmaline and quartz crystallize in the hexagonal system. Copper, gold, silver, etc. crystallize in the cubic system.

Smoky Quartz is to Milky Quartz as Amethyst is to Quartz crystal, rose quartz, etc..

Why? These are all different varieties of quartz.

Almandine is to Garnet as Elbaite is to Tourmaline.

Why? Almandine is a variety of garnet and Elbaite is a variety of tourmaline.