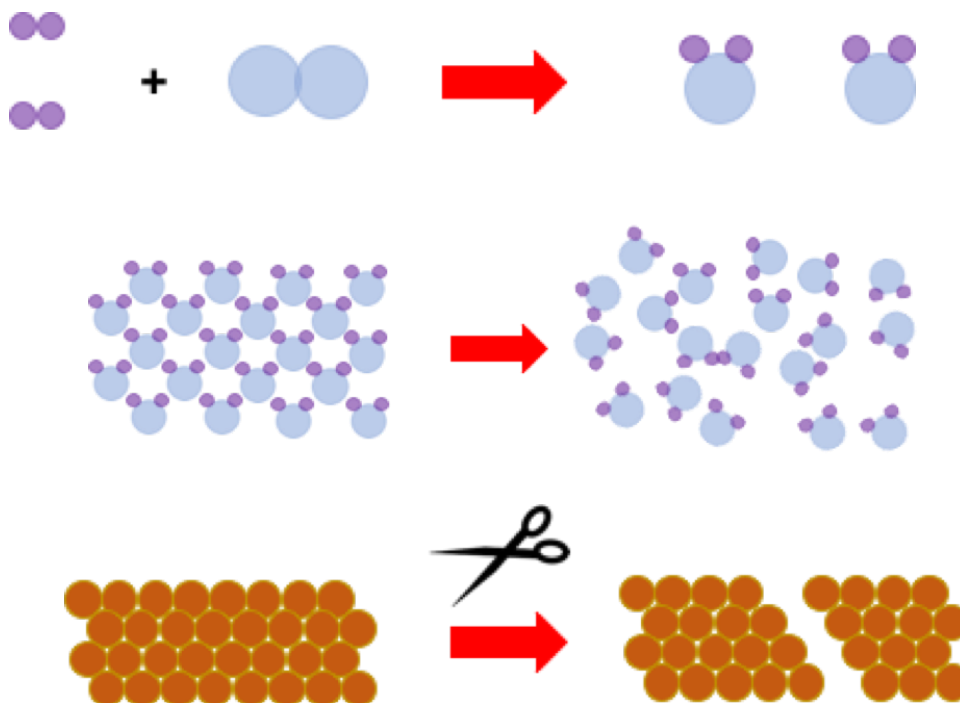


Which One Doesn't Belong – Chemical vs. Physical Properties

Question Group 1

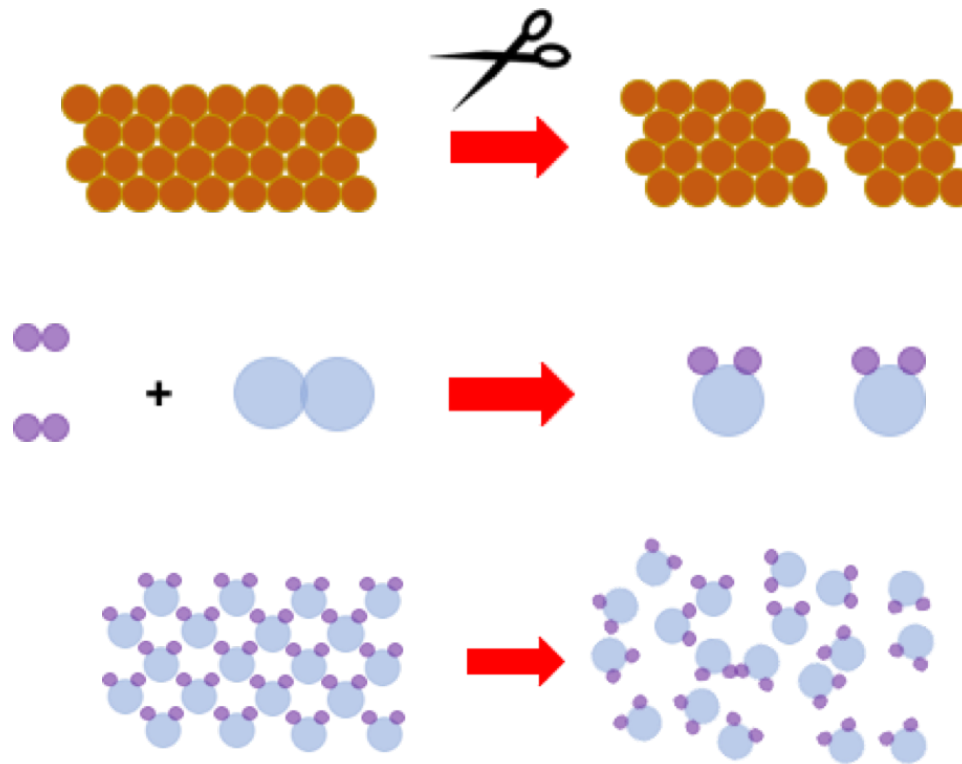
Question 1

One of these property types is not like the others. Which one doesn't belong?



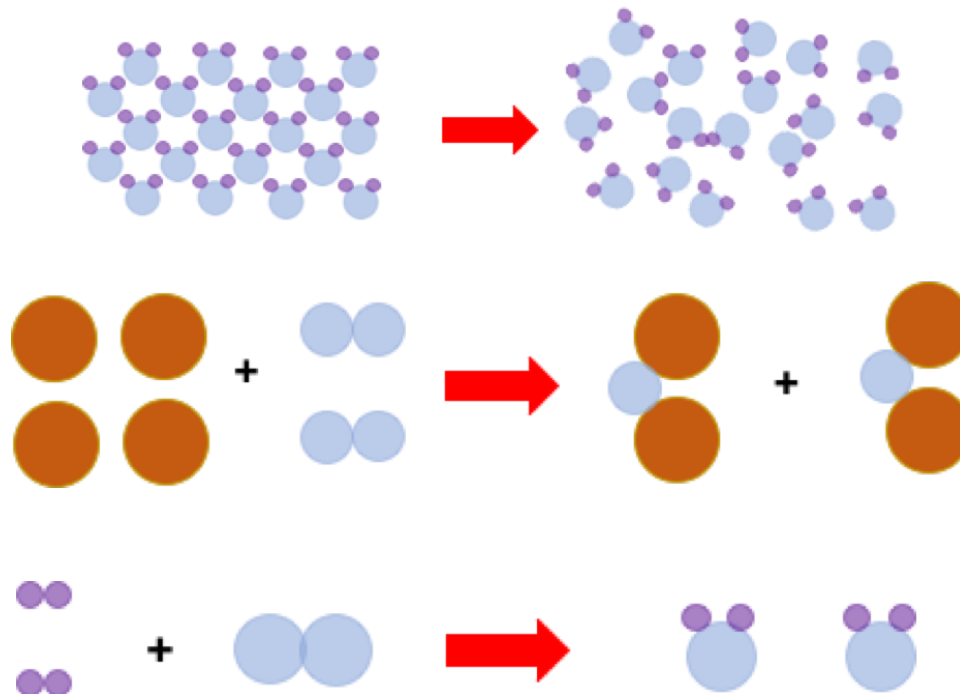
Question 2

One of these property types is not like the others. Which one doesn't belong?



Question 3

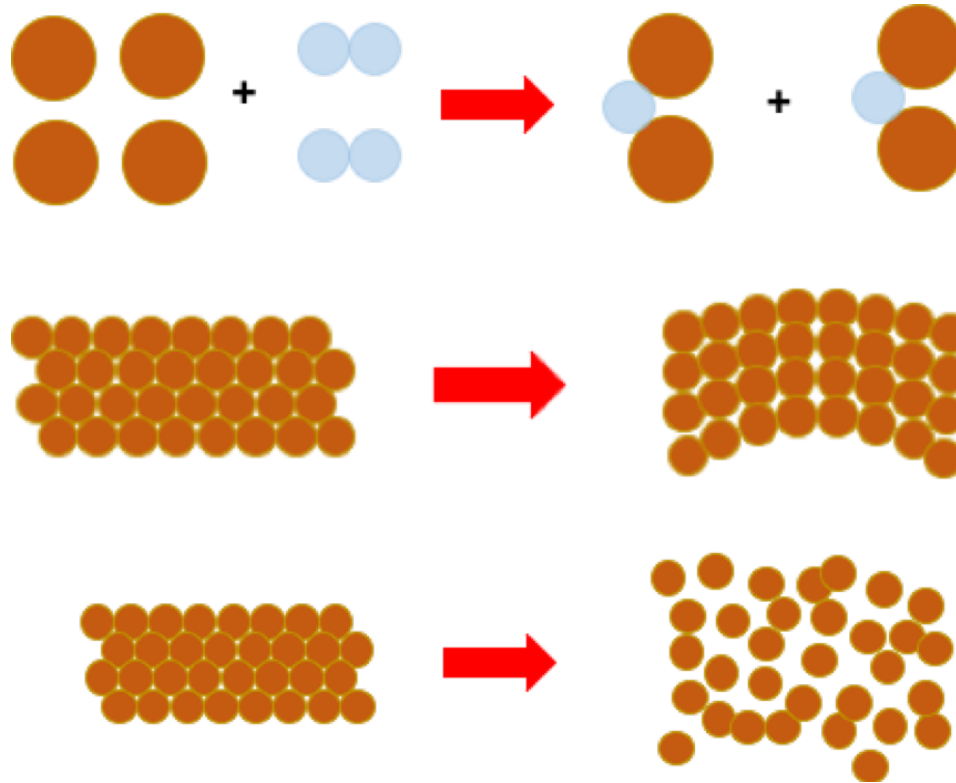
One of these property types is not like the others. Which one doesn't belong?



Question Group 2

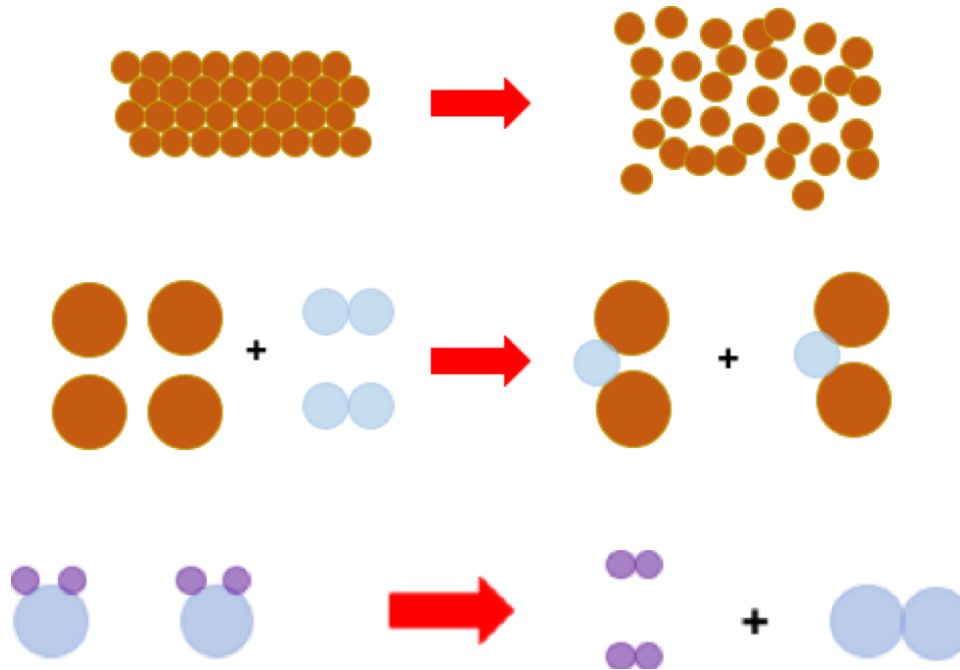
Question 4

One of these property types is not like the others. Which one doesn't belong?



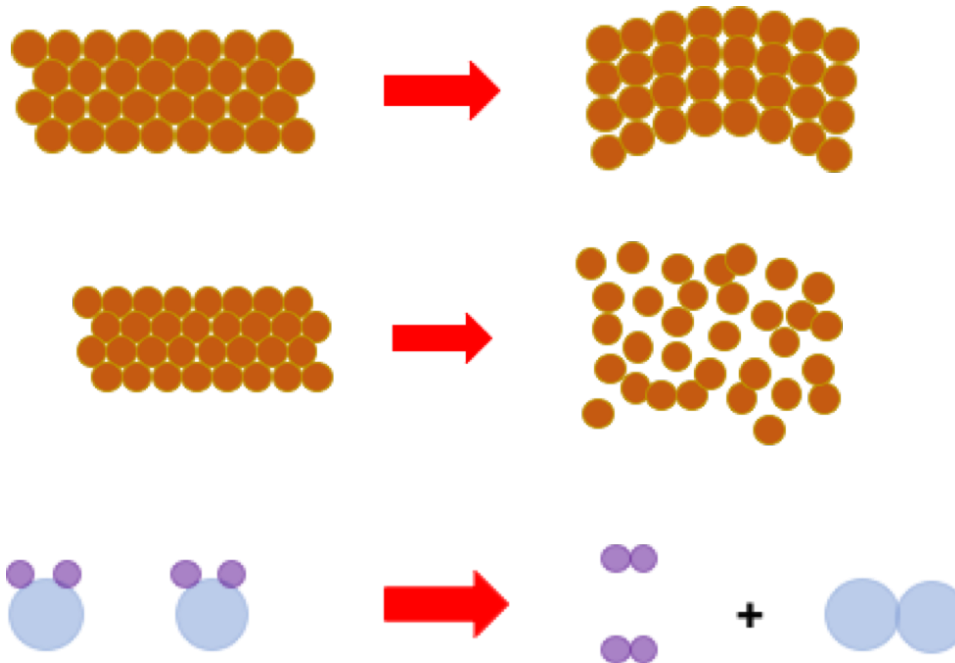
Question 5

One of these property types is not like the others. Which one doesn't belong?



Question 6

One of these property types is not like the others. Which one doesn't belong?



Question Group 3

Question 7

One of these property types is not like the others. Which one doesn't belong?



Water has a
density of
1.0 g/mL.

Because of its
high reactivity,
many minerals
contain
chlorine.

Question 8

One of these property types is not like the others. Which one doesn't belong?



Calcium oxide
reacts with water
to produce
calcium hydroxide
and heat.

Sand is not
magnetic.

Question 9

One of these property types is not like the others. Which one doesn't belong?



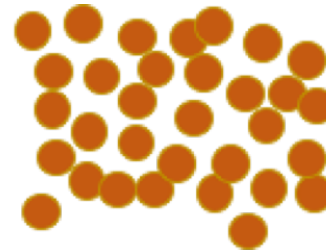
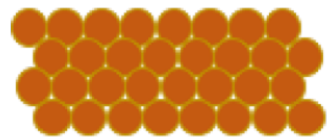
Metals such as copper are ductile and conductive; they are used to make wires.

Calcium oxide reacts with water to produce calcium hydroxide and heat.

Question Group 4

Question 10

One of these property types is not like the others. Which one doesn't belong?

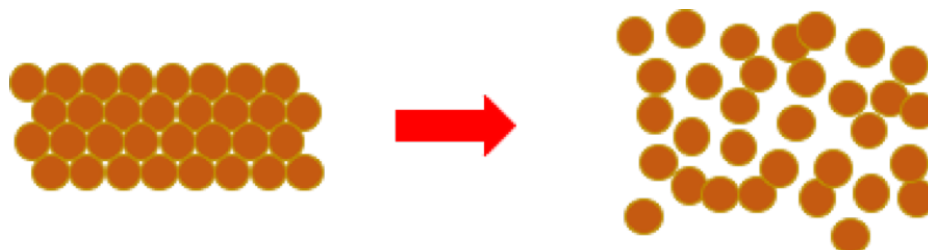


Silver (Ag)
is a
malleable
solid.

A silver nitrate
solution forms a
white solid when
mixed with blue
copper chloride
solution.

Question 11

One of these property types is not like the others. Which one doesn't belong?

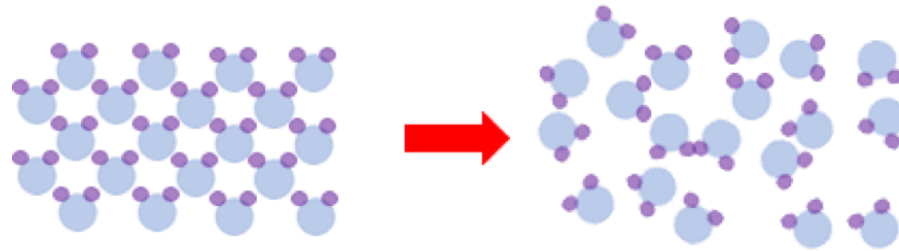


Phosphorus
reacts with
most chlorine
gas to
produce PCl_3 .

Silver (Ag)
is a
malleable
solid.

Question 12

One of these property types is not like the others. Which one doesn't belong?



Metals such as copper are ductile and conductive; they are used to make wires.

A silver nitrate solution forms a white solid when mixed with blue copper chloride solution.

Question Group 5

Question 13

One of these property types is not like the others. Which one doesn't belong?

Chlorine is a yellow-green gas with a pungent odor.

Chlorine gas can be pressurized and cooled, forming liquid chlorine.

Chlorine is the second most reactive halogen.

Chlorine has a boiling point of -29°F .

Question 14

One of these property types is not like the others. Which one doesn't belong?

Chlorine is used
as a reactant in
the production
of polyvinyl
chloride (PVC).

Chlorine is a
yellow-green
gas with a
pungent odor.

Chlorine gas
can be
pressurized and
cooled, forming
liquid chlorine.

Chlorine has a
boiling point of
-29 °F.

Question 15

One of these property types is not like the others. Which one doesn't belong?

Chlorine is the second most reactive halogen.

Because of its high reactivity, many minerals contain chlorine.

Chlorine is used as a reactant in the production of polyvinyl chloride (PVC).

Chlorine has a boiling point of -29 °F.

Question Group 6

Question 16

One of these property types is not like the others. Which one doesn't belong?

Sodium is a silvery-white metal that is easily cut with a knife.

Sodium has a boiling point of 209 °F.

Sodium has a density of 0.97 g/mL.

Sodium is highly reactive with water.

Question 17

One of these property types is not like the others. Which one doesn't belong?

Sodium has a boiling point of 209 °F.

Sodium readily oxidizes in air to form sodium oxide.

Sodium is a silvery-white metal that is easily cut with a knife.

Sodium has a density of 0.97 g/mL.

Question 18

One of these property types is not like the others. Which one doesn't belong?

Sodium is
highly
reactive
with water.

Sodium reacts
with
hydrochloric
acid to
produce NaCl.

Sodium has a
boiling point of
209 °F.

Sodium
readily
oxidizes in air
to form
sodium oxide.

Question Group 7

Question 19

One of these property types is not like the others. Which one doesn't belong?

Magnesium is
a shiny grey
solid that
bends easily.

When heated,
magnesium and
 CO_2 combine to
form carbon
and magnesium
oxide.

Magnesium
reacts with
oxygen to
release heat
and light.

Magnesium
reacts with
acids to
produce
hydrogen gas.

Question 20

One of these property types is not like the others. Which one doesn't belong?

Magnesium
reacts with
oxygen to
release heat
and light.

Magnesium
reacts with
acids to
produce
hydrogen gas.

Magnesium
has a
density of
1.74 g/mL.

When heated,
magnesium and
 CO_2 combine to
form carbon
and magnesium
oxide.

Question 21

One of these property types is not like the others. Which one doesn't belong?

Magnesium
has a melting
point of
1202°F.

Magnesium is
a shiny grey
solid that
bends easily.

Magnesium
reacts with
oxygen to
release heat
and light.

Magnesium
has a
density of
1.74 g/mL.

Question Group 8

Question 22

One of these property types is not like the others. Which one doesn't belong?

Phosphorus reacts
with alkaline
solutions to
produce
phosphine (PH_3).

Phosphorus
can be a red
or white waxy
solid.

Phosphorus will
spontaneously
ignite in air to
form P_4O_{10} .

Phosphorus
reacts with
chlorine gas
to produce
 PCl_3 .

Question 23

One of these property types is not like the others. Which one doesn't belong?

Phosphorus will spontaneously ignite in air to form P_4O_{10} .

Phosphorus reacts with alkaline solutions to produce phosphine (PH_3).

Phosphorus reacts with chlorine gas to produce PCl_3 .

White phosphorus has a melting point of 590°F .

Question 24

One of these property types is not like the others. Which one doesn't belong?

Phosphorus
reacts with
chlorine gas
to produce
 PCl_3 .

White
phosphorus has
a melting point
of 590 °F.

White
phosphorus has
a density of
1.82 g/mL.

Phosphorus
can be a red
or white waxy
solid.

Question Group 9

Question 25

One of these property types is not like the others. Which one doesn't belong?

Sulfur is an
odiferous,
brittle, yellow
solid at room
temperature.

Osmium
has a
density of
22.5 g/mL.

Silver (Ag) is
a very good
conductor of
electricity.

A marshmallow
turns black
when roasted
above the
campfire
flames.

Question 26

One of these property types is not like the others. Which one doesn't belong?

Silver (Ag) is
a very good
conductor of
electricity.

A copper
statue interacts
with air to
produce green-
colored patina.

Osmium
has a
density of
22.5 g/mL.

Sulfur is an
odiferous,
brittle, yellow
solid at room
temperature.

Question 27

One of these property types is not like the others. Which one doesn't belong?

A marshmallow
turns black
when roasted
above the
campfire
flames.

A log of
wood is
burned in the
fireplace.

An oil spill will
rest on top of
the ocean
because oil is
less dense than
water.

A copper
statue interacts
with air to
produce green-
colored patina.

Question Group 10

Question 28

One of these property types is not like the others. Which one doesn't belong?

An oil spill will
rest on top of
the ocean
because oil is
less dense than
water.

Calcium
carbonate
decomposes
into lime at high
temperatures.

A log of
wood is
burned in the
fireplace.

When Gold
(Au) is stored
in air, it will not
react with
oxygen.

Question 29

One of these property types is not like the others. Which one doesn't belong?

A log of wood is burned in the fireplace.

When Gold (Au) is stored in air, it will not react with oxygen.

Sulfur is an odiferous, brittle, yellow solid at room temperature.

Calcium carbonate decomposes into lime at high temperatures.

Question 30

One of these property types is not like the others. Which one doesn't belong?

A student
cuts a copper
wire to the
proper length.

Aspirin tablets
can be
pulverized
with a
hammer.

Calcium
carbonate
decomposes
into lime at high
temperatures.

An oil spill will
rest on top of
the ocean
because oil is
less dense than
water.

Question Group 11

Question 31

One of these property types is not like the others. Which one doesn't belong?

Over time, a cast-iron frying pan is known to rust if exposed to moisture.

A wafting motion can be used to smell a bottle of perfume.

A student cuts a copper wire to the proper length.

Osmium has a density of 22.5 g/mL.

Question 32

One of these property types is not like the others. Which one doesn't belong?

Copper has
a density of
8.96 g/mL.

A silver nitrate
solution forms a
white solid when
mixed with blue
copper chloride
solution.

Most
plastics
float on top
of water.

Aspirin tablets
can be
pulverized
with a
hammer.

Question 33

One of these property types is not like the others. Which one doesn't belong?

A silver nitrate solution forms a white solid when mixed with blue copper chloride solution.

Over time, a cast-iron frying pan is known to rust if exposed to moisture.

A student cuts a copper wire to the proper length.

Lithium metal burns with oxygen to produce a bright red flame.

Question Group 12

Question 34

One of these property types is not like the others. Which one doesn't belong?

Hexane vapors quickly combust in the presence of a flame to produce CO_2 gas and water vapor.

A silver nitrate solution forms a white solid when mixed with blue copper chloride solution.

Lithium metal burns with oxygen to produce a bright red flame.

Chlorine is a gas with a yellowish green color.

Question 35

One of these property types is not like the others. Which one doesn't belong?

Most
plastics
float on top
of water.

Chemistry
textbooks are
found to be
very
flammable.

A silver nitrate
solution forms a
white solid when
mixed with blue
copper chloride
solution.

Hexane vapors
quickly combust
in the presence of
a flame to
produce CO_2 gas
and water vapor.

Question 36

One of these property types is not like the others. Which one doesn't belong?

Most
plastics
float on top
of water.

A wafting
motion can be
used to smell
a bottle of
perfume.

Chemistry
textbooks are
found to be
very
flammable.

Chlorine is
a gas with a
yellowish
green color.