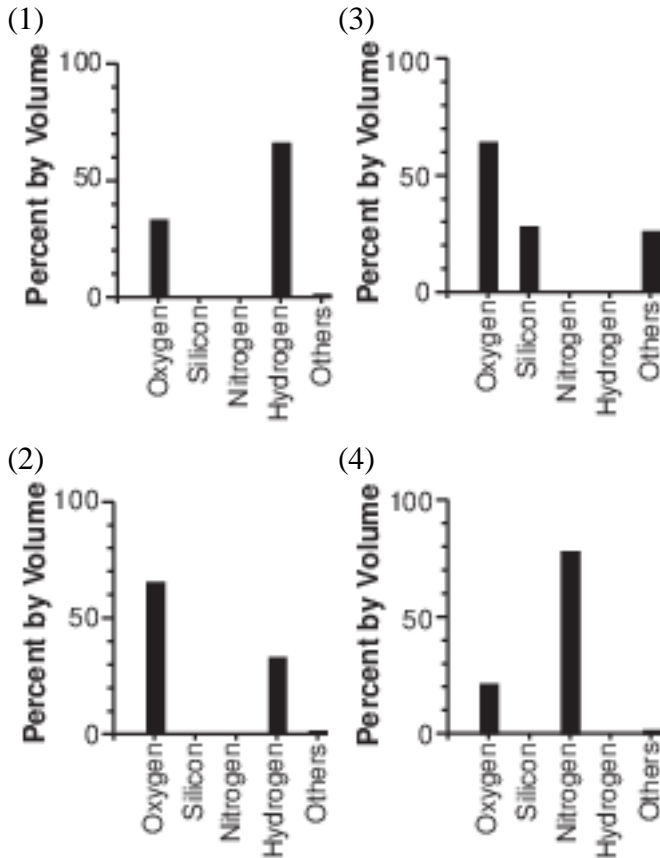


## Average Chemical Composition Of Earth Crust Hydrosphere And Troposphere

1 Which bar graph best shows the percent by volume of the elements that make up Earth's hydrosphere?



2 Which table best represents the characteristics of the continental crust and the oceanic crust?

(1)

Type of Crust	Density (g/cm <sup>3</sup> )	Composition	Relative Thickness
Continental	3.0	basaltic	thicker
Oceanic	2.7	granitic	thinner

(2)

Type of Crust	Density (g/cm <sup>3</sup> )	Composition	Relative Thickness
Continental	3.0	granitic	thicker
Oceanic	2.7	basaltic	thinner

(3)

Type of Crust	Density (g/cm <sup>3</sup> )	Composition	Relative Thickness
Continental	2.7	granitic	thinner
Oceanic	3.0	basaltic	thicker

(4)

Type of Crust	Density (g/cm <sup>3</sup> )	Composition	Relative Thickness
Continental	2.7	granitic	thicker
Oceanic	3.0	basaltic	thinner

3 Which minerals contain the two most abundant elements by mass in Earth's crust?

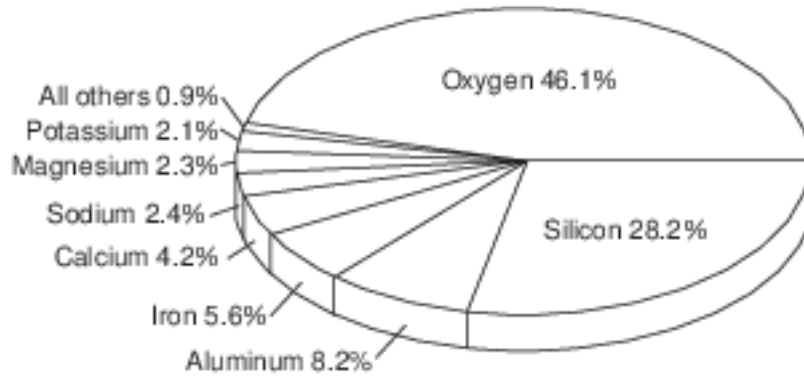
(1) fluorite and calcite

(3) amphibole and quartz

(2) magnetite and pyrite

(4) galena and sulfur

4 The pie graph below represents the composition, in percent by mass, of the chemical elements found in an Earth layer.



The composition of which Earth layer is represented by the pie graph?

- (1) crust
- (2) outer core
- (3) troposphere
- (4) hydrosphere

5 The table below shows the chemical formulas for four rock-forming minerals.

Mineral	Composition
Chalcopyrite	$\text{CuFeS}_2$
Fayalite	$\text{Fe}_2\text{SiO}_4$
Apatite	$\text{Ca}_5(\text{PO}_4)_3\text{OH}$
Barite	$\text{BaSO}_4$

Which mineral contains the two most abundant elements by mass in Earth's crust?

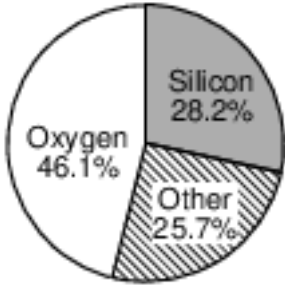
- (1) chalcopyrite
- (2) fayalite
- (3) apatite
- (4) barite

6 What is the approximate percent of oxygen by volume present in Earth's lower atmosphere?

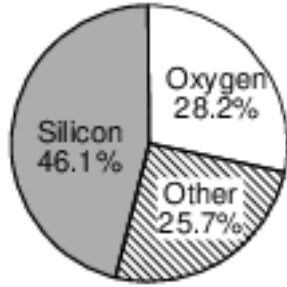
- (1) 21%
- (2) 33%
- (3) 46%
- (4) 94%

7 Which graph best represents the percentage by mass of elements of Earth's crust?

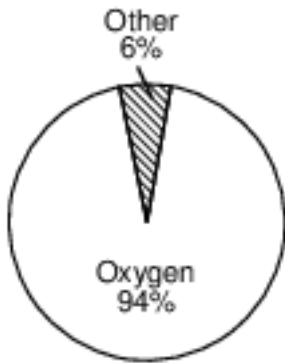
(1)



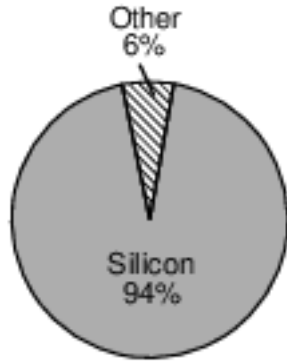
(3)



(2)



(4)



8 The most abundant metallic element by mass in Earth's crust makes up 8.23% of the crust. Which group of minerals all normally contain this metallic element in their compositions?

- (1) garnet, calcite, pyrite, and galena
- (2) biotite mica, muscovite mica, fluorite, and halite
- (3) talc, quartz, graphite, and olivine
- (4) plagioclase feldspar, amphibole, pyroxene, and potassium feldspar

## Answer Keys

1 1

2 4

3 3

4 1

5 2

6 1

7 1

8 4