## One Last Topic 1 Exam Practice ...

1. Which graph represents the fastest rate of temperature change?




(4)
2. The rate of temperature change between 6 am and noon was
(1) $6^{\circ} \mathrm{F} / \mathrm{hr}$
(2) $8{ }^{\circ} \mathrm{F} / \mathrm{hr}$
(3) $30 \mathrm{~F} / \mathrm{hr}$
(4) $18 \circ \mathrm{~F} / \mathrm{hr}$

3. The data table below shows the average dust concentrations in the air over many years for selected cities of different populations.


Based on this data table, which graph best represents the general relationship between population and concentration of dust particles?

4. As water freezes and becomes ice, its density
(1) decreases
(2) increases
(3) remains the same
5. Which list shows the phases of matter in order of increasing density for all Earth materials, excluding water?
(1) gas, liquid, solid
(3) solid, gas, liquid
(2) solid, liquid, gas
(4) gas, solid, liquid
6. As the pressure on a body of air increases, the density of the air will
(1) increase
(2) decrease
(3) remain the same

Base your answers to questions 7-9 on your knowledge of Earth Science, the Earth Science Reference Tables, and the diagrams below. The diagrams represent four solid objects made of the same uniform material. The accepted values for the volume and mass of each object are given, except for the volume of object A.



B
Mass $=6.30 \mathrm{~g}$ Volume $=3.15 \mathrm{~cm}^{3}$


C
Mass $=4.00 \mathrm{~g}$ Volume $=2.00 \mathrm{~cm}^{3}$


D
Mass $=3.50 \mathrm{~g}$
Volume $=1.75 \mathrm{~cm}^{3}$
(Not Drawn to Scale)
7. What is the density of object $B$ ?
(1) $0.50 \mathrm{~g} / \mathrm{cm}^{3}$
(3) $3.15 \mathrm{~g} / \mathrm{cm}^{3}$
(2) $2.00 \mathrm{~g} / \mathrm{cm}^{3}$
(4) $19.85 \mathrm{~g} / \mathrm{cm}^{3}$
8. What is the volume of object $A$ ?
(1) $1.00 \mathrm{~cm}^{3}$
(3) $8.00 \mathrm{~cm}^{3}$
(2) $2.00 \mathrm{~cm}^{3}$
(4) $4.00 \mathrm{~cm}^{3}$
9. Which diagram best shows what would happen if the four objects were placed in a large beaker of water at room temperature?

(1)

(2)

(3)

(4)
10. Object A expands when it is heated. Which graph best represents the relationship between the temperature and the density of object $A$ ?

(I)

(2)

(3)

(4)
11. A student calculates the densities of five different pieces of pure iron, each having a different volume. What is true of their densities?
(1) The largest piece has the greatest density
(3) The smallest piece has the least density
(2) The smallest piece has the greatest density
(4) All pieces have the same density
12. During a ten-year period, which is a non-cyclic change?
(1) the Moon's phases as seen from the Earth
(2) the seasons
(3) the apparent daily path of the Sun as seen from the Earth
(4) the impact of a meteorite on the Earth

Base your answers to questions 13-15 on the graph below. The graph shows the relationship between mass and volume for three materials A , $B$, and $C$ which are at a temperature of $20^{\circ} \mathrm{C}$.

13. What is the volume of a 40 g sample of material $A$ ?
(1) $8 \mathrm{~cm}^{3}$
(3) $3 \mathrm{~cm}^{3}$
(2) $10 \mathrm{~cm}^{3}$
(4) $4 \mathrm{~cm}^{3}$
14. What is the approximate density of material $B$ ?
(1) $1.0 \mathrm{~g} / \mathrm{cm}$
(3) $5.0 \mathrm{~g} / \mathrm{cm}^{3}$
(2) $0.2 \mathrm{~g} / \mathrm{cm}^{3}$
(4) $10.0 \mathrm{~g} / \mathrm{cm}^{3}$
15. When the volume of material $C$ is 14 cubic centimeters, its mass will be
(1) 8 g
(3) 14 g
(2) 10 g
(4) 16 g
16. The graph below shows the changes in height of ocean water over the course of 2 days at one Earth location.


Which statement concerning these changes is best supported by the graph?
(1) The changes are cyclic and occur at predictable time intervals.
(2) The changes are cyclic and occur at the same time every day
(3) The changes are non-cyclic and occur at sunrise and sunset.
(4) The changes are non-cyclic and may occur at any time.

