

RM3 JRQ

Name _____

Date: _____

1. Which process could lead directly to the formation of pumice rock?

- | | |
|---|---|
| 1. precipitation of minerals from evaporating seawater | 3. deposition of quartz sand |
| 2. metamorphism of unmelted rock material | 4. explosive eruption of lava from a volcano |

2. When granite melts and then solidifies, it becomes

- | | |
|------------------------------|------------------------------|
| 1. a sedimentary rock | 3. a metamorphic rock |
| 2. an igneous rock | 4. sediments |

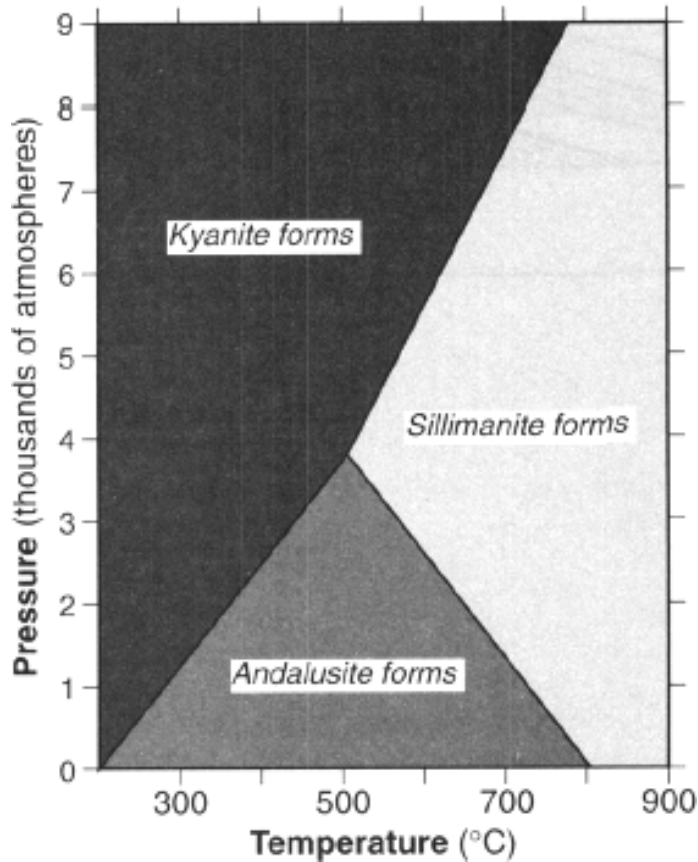
3. A student obtains a cup of quartz sand from a beach. A saltwater solution is poured into the sand and allowed to evaporate. The mineral residue from the saltwater solution cements the sand grains together, forming a material that is most similar in origin to

- | | |
|-------------------------------------|---------------------------------------|
| 1. an extrusive igneous rock | 3. a clastic sedimentary rock |
| 2. an intrusive igneous rock | 4. a foliated metamorphic rock |

4. Base your answer on the accompanying graph, which shows the crustal temperature and pressure conditions under which three different minerals with the same chemical composition (Al_2SiO_5) crystallize.

If bedrock at a collisional plate boundary contains andalusite crystals, these crystals are changed into sillimanite and/or kyanite as temperature and pressure conditions increase. What is the process called?

Conditions Under Which Three Different Minerals Composed of Al_2SiO_5 Form



1. weathering
2. solidification

3. metamorphism
4. cementation

5. What is the origin of fine-grained igneous rock?

1. lava that cooled slowly on Earth's surface
2. lava that cooled quickly on Earth's surface

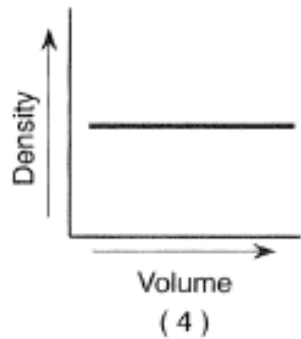
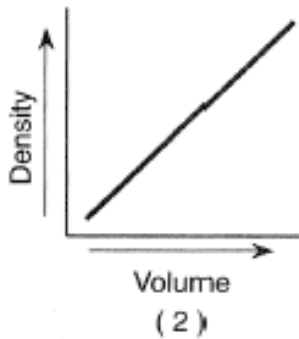
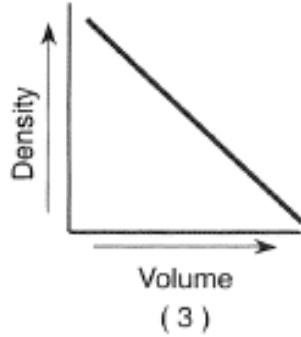
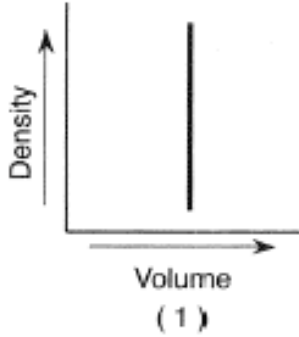
3. silt that settled slowly in ocean water
4. silt that settled quickly in ocean water

6. The accompanying data table shows the mass and volume of three samples of the same mineral. [The density column is provided for student use.]

Which graph best represents the relationship between the density and the volume of these mineral samples?

Data Table

Sample	Mass (g)	Volume (cm ³)	Density (g/cm ³)
A	50	25	
B	100	50	
C	150	75	



7. Rocks can be classified as sedimentary, igneous, or metamorphic based primarily upon differences in their

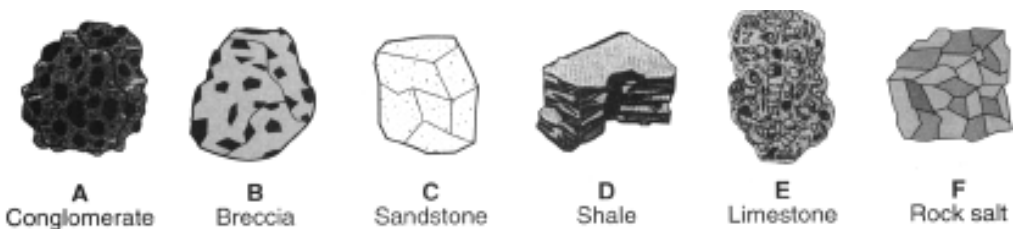
1. color
2. density
3. origin
4. age

8. Rocks are classified as igneous, sedimentary, or metamorphic based primarily on their

1. texture
2. crystal or grain size
3. method of formation
4. mineral composition

9. Base your answer on the accompanying drawings of six sedimentary rocks labeled A through F.

Most of the rocks shown were formed by

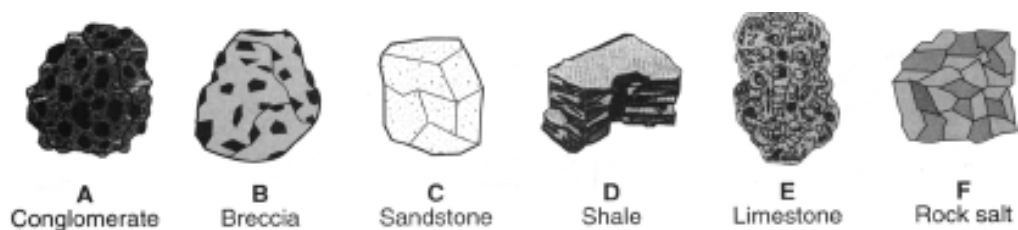


1. volcanic eruptions and crystallization
2. compaction and/or cementation

3. heat and pressure
4. melting and/or solidification

10. Base your answer on the accompanying drawings of six sedimentary rocks labeled *A* through *F*.

Which table shows the rocks correctly classified by texture?



Texture	clastic	bioclastic	crystalline
Rock	A, B, C, D	E	F

(1)

Texture	clastic	bioclastic	crystalline
Rock	A, B, C	D	E, F

(2)

Texture	clastic	bioclastic	crystalline
Rock	A, C	B, E	D, F

(3)

Texture	clastic	bioclastic	crystalline
Rock	A, B, F	E	C, D

(4)