How are different types of rocks formed?

Key

- Contact metamorphism
  Any rocks touched by heat (igneous intrusion)

Name the type of rock you would find at each location.

<table>
<thead>
<tr>
<th>Rock Type</th>
<th>Rock Name (use symbols)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Igneous</td>
<td>Granite A.</td>
</tr>
<tr>
<td>B. Sedimentary</td>
<td>Shale B.</td>
</tr>
<tr>
<td>C. Sedimentary</td>
<td>Sandstone C.</td>
</tr>
<tr>
<td>D. Sedimentary</td>
<td>Limestone D.</td>
</tr>
<tr>
<td>E. Metamorphic</td>
<td>Slate (shale metamorphs)</td>
</tr>
<tr>
<td>F. Metamorphic</td>
<td>Quartzite (sandstone metamorph)</td>
</tr>
<tr>
<td>G. Metamorphic</td>
<td>Marble (limestone metamorph)</td>
</tr>
</tbody>
</table>

in zone of contact metamorphism

(use the symbols/patterns) + look at ESRT p.67
1. Base your answer on geologic cross section shown below.

![Geologic Cross Section Diagram]

**Key**
- Sandstone
- Shale
- Limestone
- Igneous rock
- Transition zone

At which location is metamorphic rock most likely to be found?

(A) A  (B) B  (C) C  (D) D

2. According to the Rock Cycle diagram in the *Earth Science Reference Tables*, which type(s) of rock can be the source of deposited sediments?

(A) sedimentary rocks, only  
(B) igneous, metamorphic, and sedimentary rocks  
(C) igneous and metamorphic rocks, only  
(D) metamorphic and sedimentary rocks, only

3. Base your answer to the following question on the *Earth Science Reference Tables*.

Which processes result in the formation of sedimentary rocks?

(A) melting and solidification  
(B) foliation and recrystallization  
(C) pressure changes and metamorphism  
(D) burial and cementation

4. The geologic cross section below shows limestone that was intruded. Part of the limestone (zone A) was heated intensely but was not melted.

![Geologic Cross Section Diagram]

Which type of rock most likely formed in zone A?

(A) gneiss  
(B) slate  
(C) marble  
(D) obsidian

5. Which statement is best supported by the information shown in the rock cycle diagram in the *Earth Science Reference Tables*?

(A) Igneous rocks are formed from eroded sediments of metamorphic rocks.  
(B) Sedimentary rocks are composed of intergrown crystals.  
(C) Metamorphic rocks are formed by the complete melting of any other rock.  
(D) Rocks may be formed from other rocks by various processes.

6. Heat and pressure due to magma intrusions may result in

(A) graded bedding  
(B) vertical sorting  
(C) chemical evaporites  
(D) contact metamorphism