Use the following to answer questions (1) through (4): Suppose the market for aluminum consists of 5 firms, with the following production amounts:

<table>
<thead>
<tr>
<th>Firm</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ Q = \frac{500}{5} = 100 \]

[1] Firm 1’s market share equals:

A. 100
B. 40
C. 20
D. None of the above


\[ C_3 = 40 + 20 + 20 = 80 \]

A. True
B. False

[3] The Herfindahl-Hirschmann Index equals:

A. 2000
B. 2600
C. 4400
D. None of the above

\[ HHI = \frac{20^2}{500} + \frac{40^2}{500} + \frac{10^2}{500} + \frac{10^2}{500} + \frac{20^2}{500} = \frac{400 + 1600 + 100 + 100 + 400}{500} = 2.600 \]

[4] Suppose that firms 3 and 4 announce that they wish to merge, with the assumption that the production of this combined firm would be 100. According to the 1982 merger guidelines, it is likely that the Department of Justice would not challenge this merger.

A. True
B. False

[5] Suppose we are trying to decide if the geographic extent of the local market for cement is Sacramento County. Accordingly, we find: Sacramento County cement supply (i.e., production) = 20 million tons, Sacramento County cement consumption = 20 million tons, and local cement consumption from local cement supply = 0 tons. Accordingly, it is reasonable to define the local extent of the market as Sacramento County.

A. True
B. False

\[ LDFI = \frac{0}{20} = 0 \]
\[ LF = \frac{0}{20} = 0 \]
[6] If the Burger King Whopper and the McDonald's Big Mac compete in the same market, then the cross-price elasticity of demand between these two goods should be positive.

A. True
B. False

[7] The Herfindahl-Hirschman index for a monopoly equals:

A. 0.
B. 5,000.
C. 100.
D. 10,000.

[8] In the study by Dunne, Roberts, and Samuelson, which examined entry and exit conditions in U.S. industries, they found that:

A. entrants account for 80% of industry production in a typical period.
B. entrants account for 16% of industry production in a typical period.
C. exiters account for 80% of industry production in a typical period.
D. all of the above.

[9] If a firm merges with another firm in an attempt to avoid being acquired, this adheres to the motive of merger.

A. risk spreading
B. monopoly
C. efficiency
D. defensive

[10] Iron ore is used to produce steel. Accordingly, if an iron ore producer merged with a steel producer, this would be classified as a:

A. horizontal merger
B. vertical merger
C. conglomerate merger
D. none of the above