



1. What is the elevation of the midpoint of line AB ?  
  
**3025.00 feet**
2. If the grade from A to B is  $-5.432\%$  and the station at A is 5+67.89, what is the station at B ?  
  
**548+75.70**
3. What is the horizontal distance in stations from B to the point with elevation 2,345.67 on line AB ?  
  
**146.4783 stations**
4. If it is exactly 1.25 miles from B to C, what is the percent grade along this line ?  
  
**14.394%**
5. What is the elevation at the point 3000.00 feet (horizontally) from C on line BC ?  
  
**2068.18 feet**
6. How far is it in stations from A to C ?  
  
**609.0781 stations**
7. What zenith angle would be equivalent to  $-5.432\%$  ?  
  
**93°06'33"**
8. What is the zenith angle to line BC at B ?  
  
**81°48'33"**