Continuing Education Course #170  
Horizontal Curve Design To Prevent the Rollover of Heavy Trucks  
Test Worksheet

1. While traveling on a curved roadway, trucks will rollover before they would skid, whereas a passenger car will skid before they would rollover.  
a. True  
b. False

2. To convert equations (1) and (2) to the Metric System use metric units and change 15 to 127.  
a. True  
b. False

3. The side friction factor used in the design of horizontal highway curves may not be adequate for heavy trucks, especially at low design speeds.  
a. True  
b. False

4. The Rollover Threshold value of a heavy truck is defined as the maximum amount of lateral acceleration a truck can withstand without rolling over.  
a. True  
b. False

5. The lateral acceleration acting on a tractor-trailer, with a rollover threshold value of 0.31 is?  
a. 0.17  
b. 0.18  
c. 0.16

6. The highway designer should check for truck rollover at the beginning and the end of horizontal curves.  
a. True  
b. False

7. In equation (3) the safety margin covers the contingency of a heavy truck going 40 mph on a curve with a design speed of 30 mph.  
a. True  
b. False

8. The suggested Rollover Threshold value used by the NY DOT for a tanker truck is:  
a. 0.22 g’s  
b. 0.32 g’s  
c. 0.26 g’s

9. A horizontal curve has a design speed of 40 mph, a radius of 444-feet, and 6-percent superelevation at its P.C. The calculated rollover speed for a truck with a rollover threshold of 0.31 g’s, would be:  
a. 35 mph  
b. 40 mph  
c. 45 mph

10. Some of the critical locations on a highway where the designer should check for truck rollover are:  
a. Exit Ramps  
b. Sharp curves at the end of steep down grade  
c. Reverse curves  
d. All of the above