**Math 11 AWP Unit 5 – Slope and Rates of Change**

Assignment 3 – Grade and Pitch

1. Heckman Pass is a very steep section of highway connecting Anahim Lake and Bella Coola, B.C. At its steepest section, it rises 900 m over a run of 5 km. What is the percent grade of this section?
2. So that water will drain properly, a patio attached to a house should slope downward about 2 ½ inches for every 10 feet of run. Calculate:
3. The slope; and
4. The percent grade.
5. One of the steepest railways in the world is the Lisbon tram in Portugal. In one section, it has a grade of 13.5%.
6. Express this as a slope.
7. What is the ride for a run of 15 m?
8. The pitch of roof on a lean-to that Dianna is building is 2:5. If the lean touches the ground 4.8 m from the base of the building, how high up the building does it reach?
9. What is the pitch of the roof of an A-frame building if its height is 3.6 m and its width is 5.4 m?
10. The roof of a tool shed has a pitch of 2:5. If the shed is 7 feet wide, what is the rise of the roof?