

Unit 6 - WA20.9 - Slope and Rate of Change Practice Questions #2

Be sure to input your answers here to receive credit: <https://bit.ly/32JRyvM>

1. A dirt bike requires 15 L of gas to be mixed with 4 L of oil. If you use 25 L of gas, how much oil will you need?
2. If 10 cm on a map represents 35 km of actual ground, how many centimetres would 45 km of actual ground be on the map?
3. A recipe for corn chowder includes 3 cups of corn, 2 cups of water, and 1.5 cups of cream. If you increase the yield of the recipe and use 7.5 cups of cream, how much corn will you need?
4. Calculate the slope in the following situations.
 - a. A wheelchair ramp has a rise of 2 feet and a run of 18 feet.
 - b. A snowboard jump rises 1.25 m over 6 m of horizontal distance.
 - c. A roof rises 5 feet over a horizontal distance of 18 feet.
 - d. A hill rises 12 metres over a horizontal distance of 8 metres.
 - e. A slide covers 3.5 m of ground and is 2.6 m tall.
5. The slope of a hill is $\frac{3}{190}$. The hill has a rise of 350 m. What is the horizontal distance covered by the hill?
6. The slope of a staircase is 0.85. If it rises 210 cm, what is the run?
7. The slope of a street is 0.64. If it covers 28 m of horizontal distance, what is the rise of the street?
8. Leslie works for a shipping company. He regularly carries boxes up and down several stairs and has decided that it would be easier if he built a ramp. The stairs have a rise of 2.5 m for a run of 6.0 m. What is the slope of the stairs?
9. Harry is building a staircase with a slope of 0.79. If the total rise of the staircase is 203 cm, what is the total run of the stairway?
10. The slope of a slide for a playground is to be $\frac{19}{10}$. If the maximum space available for the slide is a horizontal distance of 1.5 m, how high can the slide be?
11. Calculate the slope of the roof and of the diagonal trusses.

