

Slope Chapter Review

Round lengths and slope to the nearest hundredth and angles and % grade and pitch to the nearest whole number

1. Calculate the slope of a ramp rising to a deck that is .8 m high and starts a horizontal distance of 4.5 m from the deck.
2. On a set of stairs, the slope of the railing is $\frac{2}{3}$. How high will the railing be if the horizontal distance is 250 cm from the base?
3. A waterslide has an angle of elevation of 20° . What is the rise for a run of 2.6 m?

4. Garry is making a temporary ramp from the ground to the top of his patio so that he can roll a cart up it to move furniture in. The surface of the patio is 3 feet 9 inches above the ground and Garry wants the ramp to have a slope of no more than 0.375.
- a) What is the shortest horizontal distance he can have from the base of the patio to the base of the ramp?
- b) What is the shortest length the surface of the ramp can be?
- c) What will be the angle of elevation of the ramp?

5. Shandra has a greenhouse in her backyard. The pitch of the roof is 4:12.
- a) What is the slope of the roof?

 - b) What is the angle of elevation?
6. One section of the Crowsnest Highway has a 6% grade. What will be the vertical change for a horizontal change of 15 km?
7. a) How long will a section of railroad track be if it rises 6.8 metres for a run of 125.9 metres?

b) What is the percent grade of the road?

8. If the pitch of a roof is 7:12, how much will it rise for a span of 3.5 m?

9. A roof has a pitch of 5:12. It rises 8 feet.

a) What is the run?

b) How long is the **slanted surface** of the roof?

c) If the minimum code for the angle of elevation for a roof is 20° . Is this roof to code?