A wireless phone company charges $20 for a basic plan each month plus $0.25/min for each call.

a. Find the total cost for the plan if you use 300 minutes.

b. Find the total cost for the plan if you use 400 minutes.

c. What does slope mean in the context of this problem?

Totally different question:

Find the pitch of the roof shown in the picture.
A town’s building code states that stairs and ramps must have a handrail. The sketch at the right has a scale of 7 inches to each grid space.

a. What is the slope of the ramp?

b. How long is the ramp in inches?

c. The handrail needs to be at least 35 inches above the ramp. Mark the point 35 inches above the top of the ramp. What are its coordinates?

d. Give the EXACT coordinates of 3 other points on the handrail.

(_____, _____)  (_____, _____)  (_____, _____)  

e. Carefully graph the handrail with a colored pencil.

f. Use a geometry term to describe the relationship between the ramp and the handrail.

g. What is the slope of the handrail?
A ramp is installed in front of a library entrance (as shown in the picture below).

a. What is the slope of the ramp shown in the picture?

By law, the **maximum** slope of an access ramp in new construction is \( \frac{1}{12} \).

b. Does the ramp shown above meet these requirements? Explain how you know.

The plan for the new Kingston town library shows a 3-ft height from the ground to the main entrance. The distance from the sidewalk to the building is 40 ft.

c. Sketch and label a picture to represent the entrance to the building.

d. If you assume the ramp does not have any turns, can you design a ramp that complies with the law?
A certain mountain bike trail has a section of trail with a grade of 8%.

a. What is the slope of the mountain? [Draw and label a picture]

b. After riding on the trail, a biker is 120 meters higher than her original starting position. If her starting position is represented by the origin on a coordinate plane, what are the possible coordinates of her current position? [Draw a picture!]

c. About how many meters did the biker travel from her original starting position and her current position? Show your work to receive full credit.