Floor Graph City Challenge
Slope Edition

Part 1: Plotting Points _____/4 pts
Identify the coordinates for each location on our floor graph map. Ordered pairs must be written in the correct format **(x , y)** and in the correct order.

_(____,____)_School

_____Hospital

_____Police Department—What quadrant? _____

Part 2: Naming Points _____/5 pts
Place each building at the coordinates given.

Church: origin

What are the coordinates of the origin? _____

House: (-2, 5)—What quadrant? _____

Bank: (1, -5)

Part 3: Lines _____/12 pts
Use the equations of a line given below to plot the streets. Use the method listed for each. Show all work!

-Main Street: Function Table
y=3x+2

-State Avenue: solve for x and y intercepts
y=-1/2x-4
x-intercept:
y-intercept:

-Graphing Lane: solve for y-intercept and slope
3y=x+6
slope:
y-intercept:

-Powell Parkway passes through (3,3) and (0,-4).
What is the slope of this line?

What is the equation of this line (y=mx+b format)?

If the y-axis was a road, what would its slope be?

What would its equation be?

Part 4: Application—Word Problems   _____/7 pts
A crash happens at the intersection of Graphing Lane and Main Street. Place 2 cars and a CRASH there. What are the coordinates of the crash?

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YOU MAY USE CALCULATOR FOR THE REST OF THIS PAGE, but you must show all work.

How far does along Graphing Lane does an ambulance have to drive from the hospital to the crash? Hint: Go straight down from the crash to the x-axis. Then go straight along the x-axis to the hospital. Those 2 lines make the 2 legs of a right triangle. Count the units for each straight side. Then use the Pythagorean Theorem to figure out how many units it is from the hospital to the crash. Round to the nearest tenth.

If the ambulance drives at a rate of 2 units per minute, how long will it take to get to the crash?

The Rescue Helicopter can travel the same route at a rate of 5 units per minute. How much sooner than the ambulance will the helicopter arrive at the crash?