

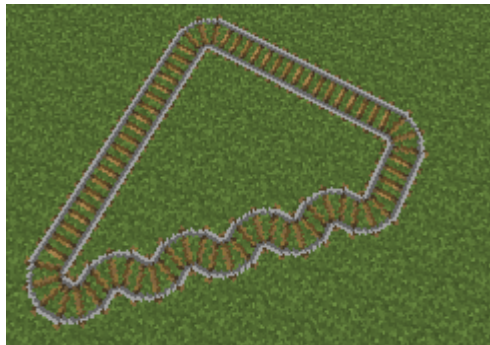
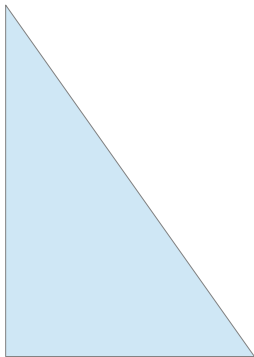
# Minecraft Math

1. Open a superflat world in minecraft and design an experiment to test how far empty minecarts will travel in minecraft in different circumstances. Presume that multiple power rails are placed side by side sharing one redstone torch. Fill in your results here:

	straight	uphill	diagonal
with one power rail			
with two power rails			
with three power rails			
starting from one block up.			
starting from two blocks up.			
starting from three blocks up.			

2. A diagonal line in minecraft isn't exactly straight. Use a piece of graph paper to explore this. Fill in squares to make two sides of a triangle and then continue filling in squares to make the wavy line that serves as a diagonal line in a minecraft railway. Does building a diagonal track save railway track in minecraft? Could it save power rails?

A



B

3. One possibility is that the curves in a diagonal track give the minecart some extra power. Design a track to test whether it is any curves or the particular forward-side pattern that saves power rails.

4. If you had 28 track pieces and four power rails and four torches, what would the optimal positioning of the power rails? If you had only three torches would it still be enough to power the whole distance?