

Figure 2: Bracing: 1 beam = 3 flat plates

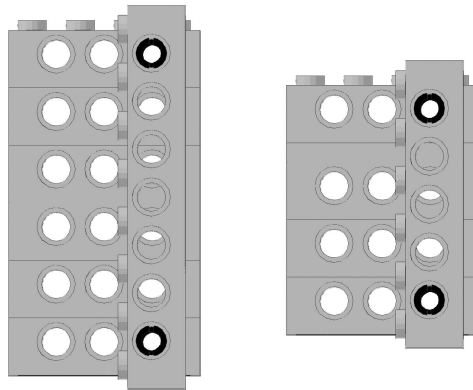


Figure 3: Other examples of perpendicular bracing

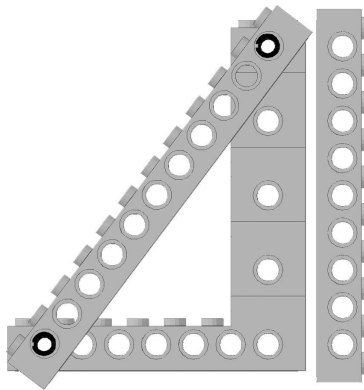


Figure 4: Using Pythagoras' Theorem for Diagonal Bracing

## 5 Activity

Construct a cube at least 10 FLUs on a side that can survive a 6' droptest.

For more practice, try constructing the motor jig as shown in Section 4.4. You will also see some creative uses of bracing when you complete Assignment 1.

## 6 A few things for the future

- **Drop Test Blues** Doing the drop test can really scary when it is nearing the deadline and you have become one with your robot. to reduce this stress, we recommend that you incrementally test your robot's structure. make sure each major component is structurally sound, especially your gearbox and motor mount assembly, and your container/mount for your hawker batteries.
- **Using Technic** Consider using the the rounded technic pieces for bracing in addition to normal lego bricks. it is easy to run out of bricks, and towards the end it can be difficult to free up more bricks from a well-braced robot.