

Drawing from Directions

Materials:

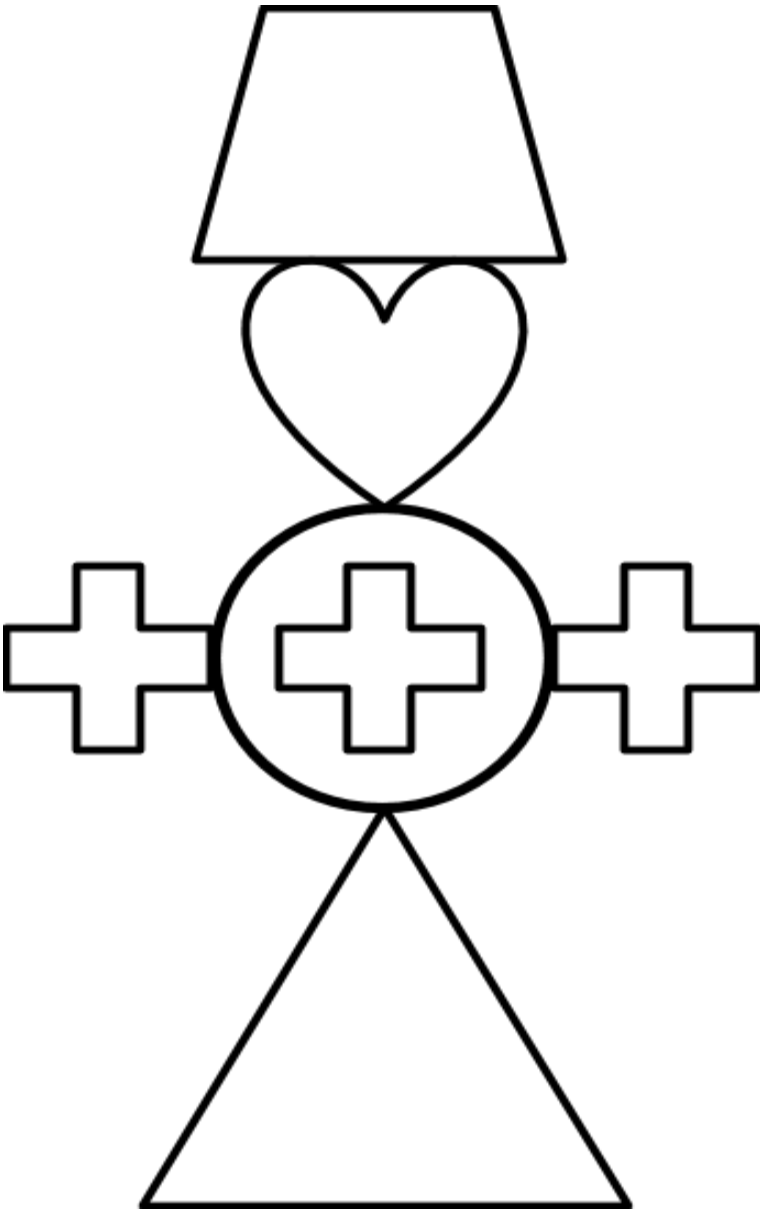
Pencil and paper; a partner or two to try your directions

Directions:

1. Draw a simple line design. There are samples at the end of this document. You can make adjustments to your interests or your desired level of challenge.
2. Write directions for how someone else could draw your design without looking at it first. If it helps, you can *decompose* the design into parts and focus on writing directions for one part at a time. Computer scientists decompose problems all the time!
3. When you are finished writing directions, ask a family member to follow your directions. Don't show them your design!
4. Check out the drawing your partner made from your directions. Does it look like you expected?
5. Try making some adjustments to your directions so that someone else might be able to follow them to make a more accurate drawing of your design. Where can you be more specific or clear? This process of correcting mistakes and making your directions better is called *debugging*, and computer scientists do it all the time as they code!
6. Give your improved directions for someone else to follow. How did it go? Did your debugging make the result look more like your original design?

(Sample designs are on the next two pages.)

Sample Design 1



Sample Design 2

