

US Flag using official proportions

1. Create a star image from the Polygon Star Maker at: <http://steamcoded.org/StarMaker.svg>
Set: Sides=5, Depth=62%, uncheck the Shadow box, then click on "Get the Code for the Star"
2. Copy the code into the text editor and save the file as flag.svg
3. Move the style attribute of the <use> element to the <symbol> element of the star and change the fill color to white.
4. Change the <svg> element viewBox attribute from "0 0 600 600" to "0 0 1900 1000" which is the correct proportions of the Flag of the United States of America
5. On the line after the <use> element, add a white rectangle the size of the flag.
`<rect x="0" y="0" width="1900" height="1000" style="fill:white;" />`
6. Create the red stripes using a <path> element. Draw a vertical line down the center of the rectangle of step 3. Style it to have a red (#b2bb34) stroke, a stroke-width = 1900px and stroke-dasharray that is 1/13 of the height ON and 1/13 of the height OFF.
`<path d="M950,0L950,1000"
style="stroke:#b22234;stroke-width:1900px;stroke-dasharray:76.923,76.923;" />`
7. Create a blue (#3c3b6e) rectangle <rect> element that is
2/5 of the width of the flag ($2/5 \times 1900 = 760$) and
7/13 of height of the flag ($7/13 \times 1000 = 538.5$)
`<rect x="0" y="0" width="760" height="538.5" style="fill:#3c3b6e" />`
8. Create a group <g> element with attributes id="row1" transform="translate((32.5,23.2)"
Remember the closing </g> tag
9. Move the <use> element from the Polygon Star Maker code to be a child of the group <g> element of step 6. Change width and height to 61.6 and add attribute x="0".
`<use x="0" width="61.6" height="61.6" xlink:href="#star" />`
The flag has stars with a diameter that is 4/5 the height of a stripe ($4/5 \times 76.923 = 61.6$)
10. Copy the <use> element of step 8 and paste 5 more times in the "row1" group
Change the x attributes increasing by 126.6 to each one,
for example x="0", x="126.6", x="253.2", x="379.8", x="506.4", x="633"
11. Copy the code for the "row1" group and paste below the row1 group.
Change the id to "row2", and the transform to transform="translate(95.8,77.2)"
Since row2 only has 5 stars, delete the last <use> element of the "row2" group.
12. Below the "row2" group, reuse the "row1" group and move it down 108
`<use y="108" xlink:href="#row1" />`
13. Next reuse the "row2" group and move it down 108
`<use y="108" xlink:href="#row2" />`
14. Next reuse the "row1" group and move it down 216
`<use y="216" xlink:href="#row1" />`
15. Next reuse the "row2" group and move it down 216
`<use y="216" xlink:href="#row2" />`
16. Next reuse the "row1" group and move it down 324
`<use y="324" xlink:href="#row1" />`
17. Next reuse the "row2" group and move it down 324
`<use y="324" xlink:href="#row2" />`
18. Next reuse the "row1" group and move it down 432
`<use y="432" xlink:href="#row1" />`