# Vector Drawing Puzzle Picture: Christmas Tree

There are two main ways of representing images: **bitmap images** and **vector images**. In bitmap images you store the colour of very individual pixel or square in the image. In vector images you store instructions of the lines or shapes to draw and order to draw them in.

Follow the vector instructions to draw this christmas picture.

The **bounding box** of a shape is the smallest rectangle the shape fits in. The size given for each shape is the size of its bounding box. The position is the bottom, left corner of its *bounding box*. Triangles are isosceles triangles with the base at the bottom.
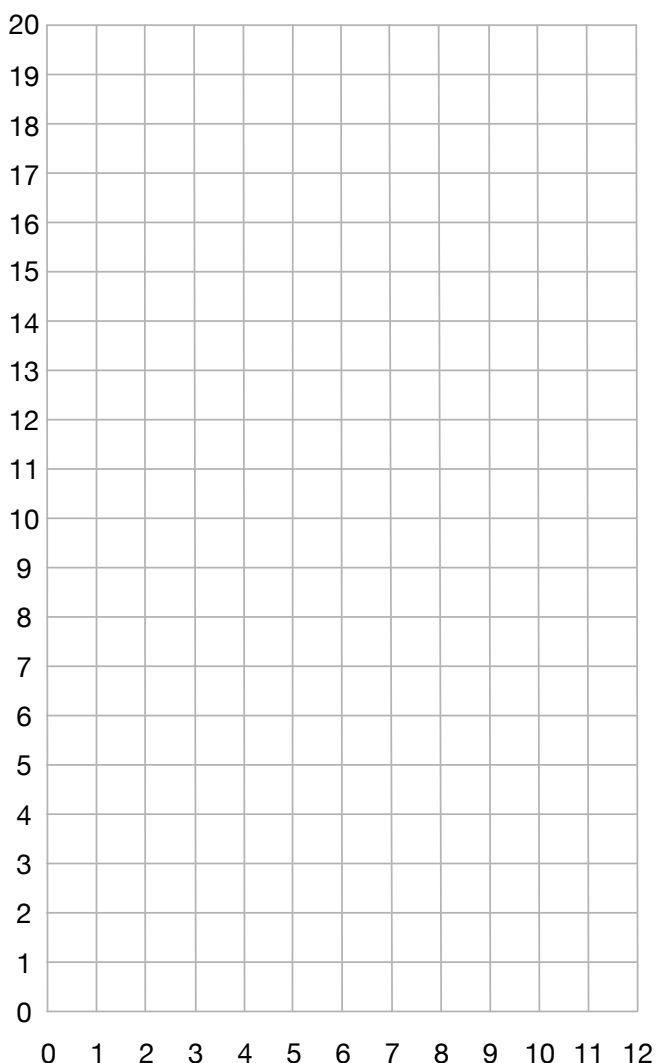
**VECTOR DRAWING INSTRUCTIONS**

Rectangle Brown SIZE (4,4) AT (4,0)
Triangle Green SIZE (12, 4) AT (0,4)
Triangle Green SIZE (12, 4) AT (0, 6)
Triangle Green SIZE (12, 4) AT (0, 8)
Triangle Green SIZE (10, 4) AT (1,10)
Triangle Green SIZE (8, 4) AT (2, 12)
Triangle Green SIZE (6, 4) AT (3, 14)
Star Yellow SIZE (3,3) AT (4.5, 17)
Circle Red SIZE (1,1) AT
Circle Red SIZE (1,1) AT
Circle Red SIZE (1,1) AT
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Circle Blue SIZE (1,1) AT

Now draw the picture again twice as large overleaf, by scaling the vector drawing instructions by a factor of 2. To scale a vector image (make a bigger or smaller version), multiply all numbers in the instructions with the scaling factor. For example to draw the image twice as big, first multiply all the numbers in the instructions by 2.