We're working on this resource which will take several pages. We will make it available soon.

Meanwhile, you might like to complete this challenge for a start.
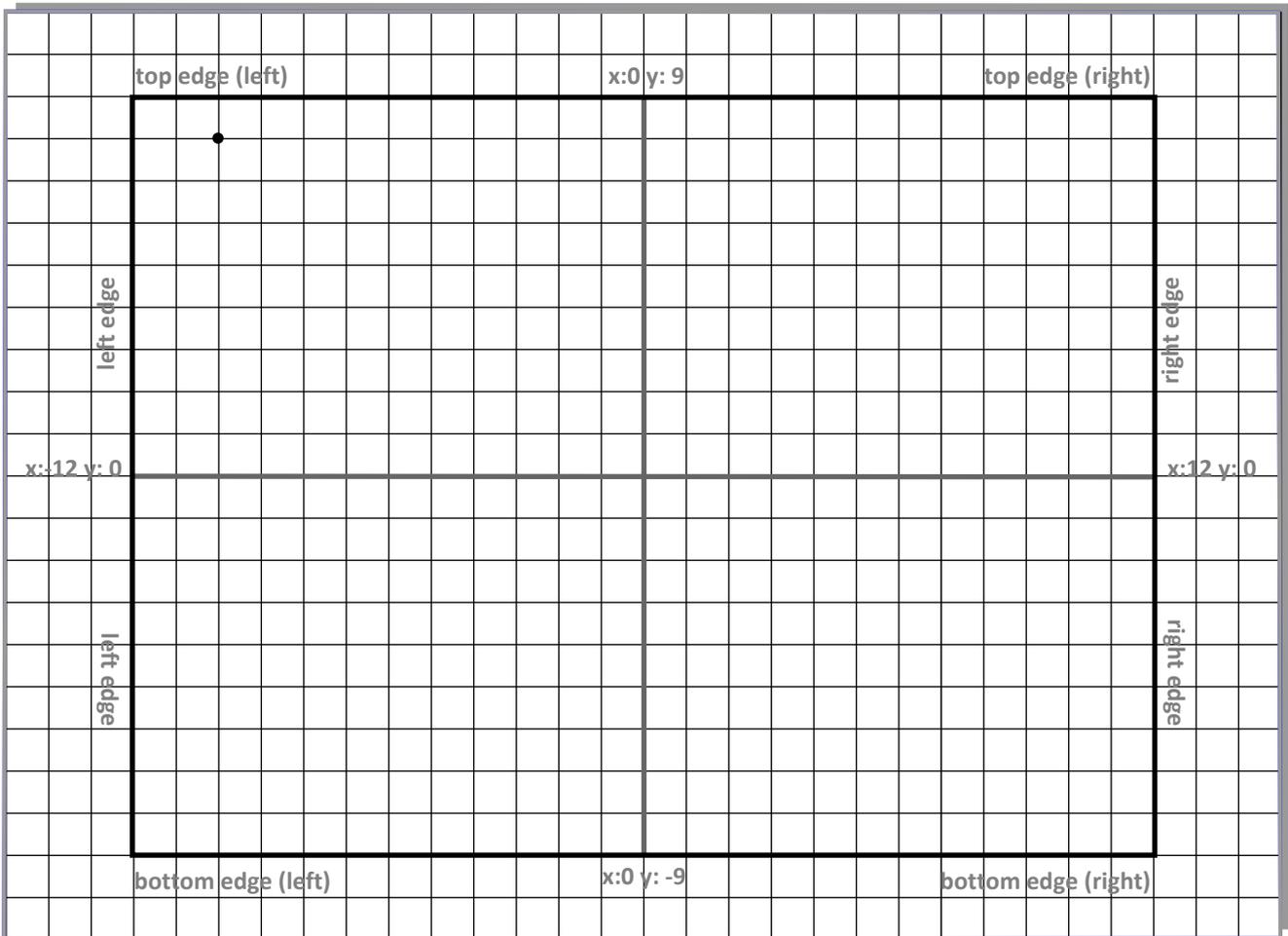
A. in Your Sum Copy
Draw a Map of the Scratch Stage and Draw a Dot

1. This picture represents a page of your sum copy. Turn your sum copy so that the long sides are on top and bottom and the short sides are left and right. Open a blank page.
2. Get the exact **centre point of the page** and draw a horizontal line (across) and a vertical line (up/ down).
3. Measure a rectangle that's 12 squares to the left of centre and 12 squares to the right of centre **and also** 9 squares below centre and 9 squares above it.

   You have a map of the Scratch stage measuring 24 squares across by 18 squares high.

4. Draw a dot as shown in the picture (it's 10 squares back from centre and 8 squares up)

top edge (left)　　　x:0 y: 9　　　top edge (right)

left edge　　　right edge

x:12 y: 0　　　x:12 y: 0

left edge　　　right edge

bottom edge (left)　　　x:0 y: -9　　　bottom edge (right)

B. Open Scratch and Code a Dot in a Similar Location

5. In the backdrops library of Scratch go to the category **Other** and choose the **xy-grid-20px**.
   Notice that the stage looks like the map in your your copybook.
6. Get the *basketball* from the sprites library.
7. Set it in the centre by clicking the blue blocks **set x to:0** and **set y to:0** in the Motion palette.

set x to 0 — blue blocks in the Motion palette

set y to 0

glide 1 **secs to x:** (-10) ✳ (20) **y:** (8) ✳ (20)

8. You need two light green *multiplication operators* from the Operators palette and the blue **glide** block to complete the challenge.
9. Code the *basketball* to glide to the same stage location as the dot in your copybook by making it go **back 10 squares** from the centre of the stage and go **up 8** squares. Use the *minus* sign for back or down.

You Should Know

The Scratch stage, without the xy-grid-20px consists of 480 tiny dots (or pixels) across and 360 rows of pixels from bottom to top. That's 172800 px *quite a lot!* Each square of the grid is **20x20px** and squares are easier to use than pixels. When you see **20** you know it's a grid square. There's also a **30x30px** grid in Scratch.