Using Plot Values To Find Areas

Suppose we want to find the area between $f(x) = x^2 - 2$ and g(x) = 0.5x - 1 from x = -2 to the first positive intersection of the two graphs.

From the hand shaded screenshot shown above right it can be seen that to find the area we need to split it into two sections, with the boundaries being -2 and the two intersections.

After finding the first intersection using **FCN** *Intersection* we change into the **HOME** view and store the results into memory variable **A**.

We then do the same thing for the second intersection, storing the result into **B**.

We can now calculate the area in the **HOME** view, using $f_1 - f_2$ for the first and $f_2 - f_1$ for the second. Use **COPY** to duplicate the first integral and edit it to adjust the functions and limits.

Finally, **COPY** the two solutions and add them to give the final answer.



