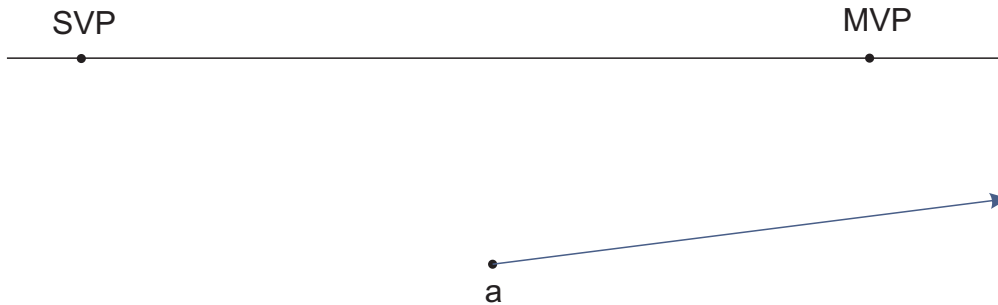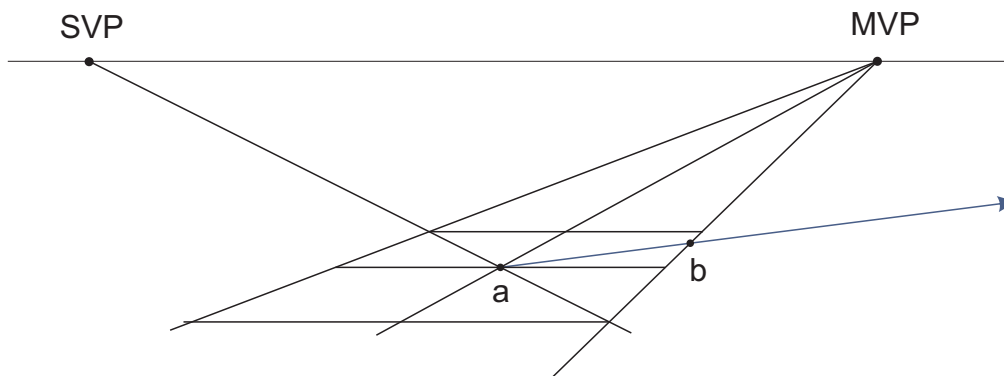# Finding the Second Vanishing Line from an Arbitrary Vanishing Line.

Below we have drawn an arbitrary vanishing line from (a) and we want to find a second vanishing line that would be at a 90 degree angle to it.

SVP   MVP

a

First construct a square around (a) as shown below at any convenient size.
Note that the vanishing line intersects the square at (b).

SVP   MVP

b

a

Find the corresponding point (c) on the opposite side of the square by drawing (b c).
From SVP, draw a line through (c) until it intersects the outside of the square at (d)

SVP   MVP

c
a   b

d
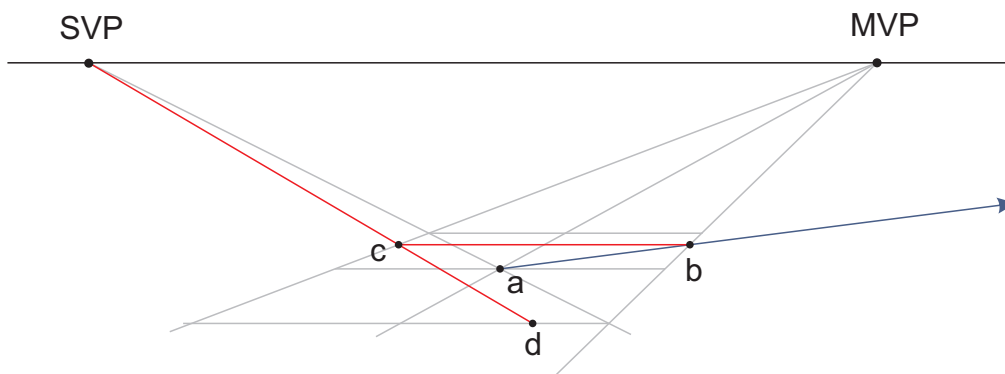
The previous step can be done in reverse order and still yield the same point (d), as shown below.
Draw a line from (b) to SVP until it intersects the edge of the square at (c).
This time, to find the corresponding point (d) on the opposite edge of the square, we have to draw a line from MVP through (c) until it intersects the opposite edge of the square at (d).
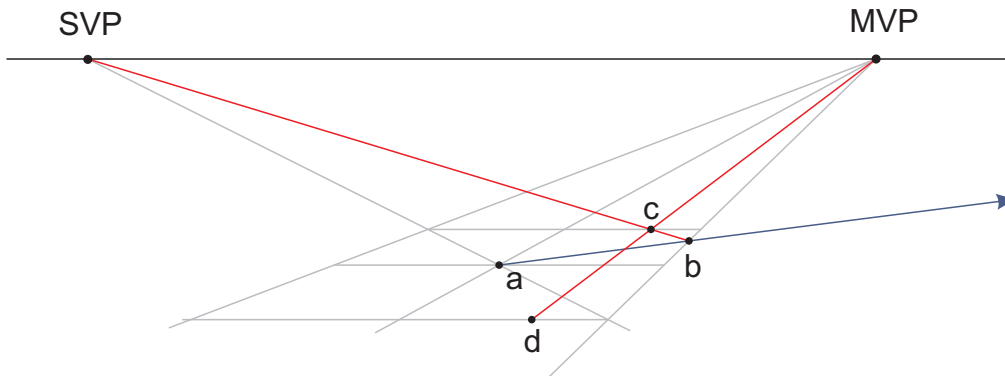
Either way, once you have (d) all you have to do is draw a line from (d) through the centre of the square (a) to get your vanishing line.
In this case, I can extend it to the horizon to form a vanishing point.