$points := \mathrm{matrix}(0, 2)$

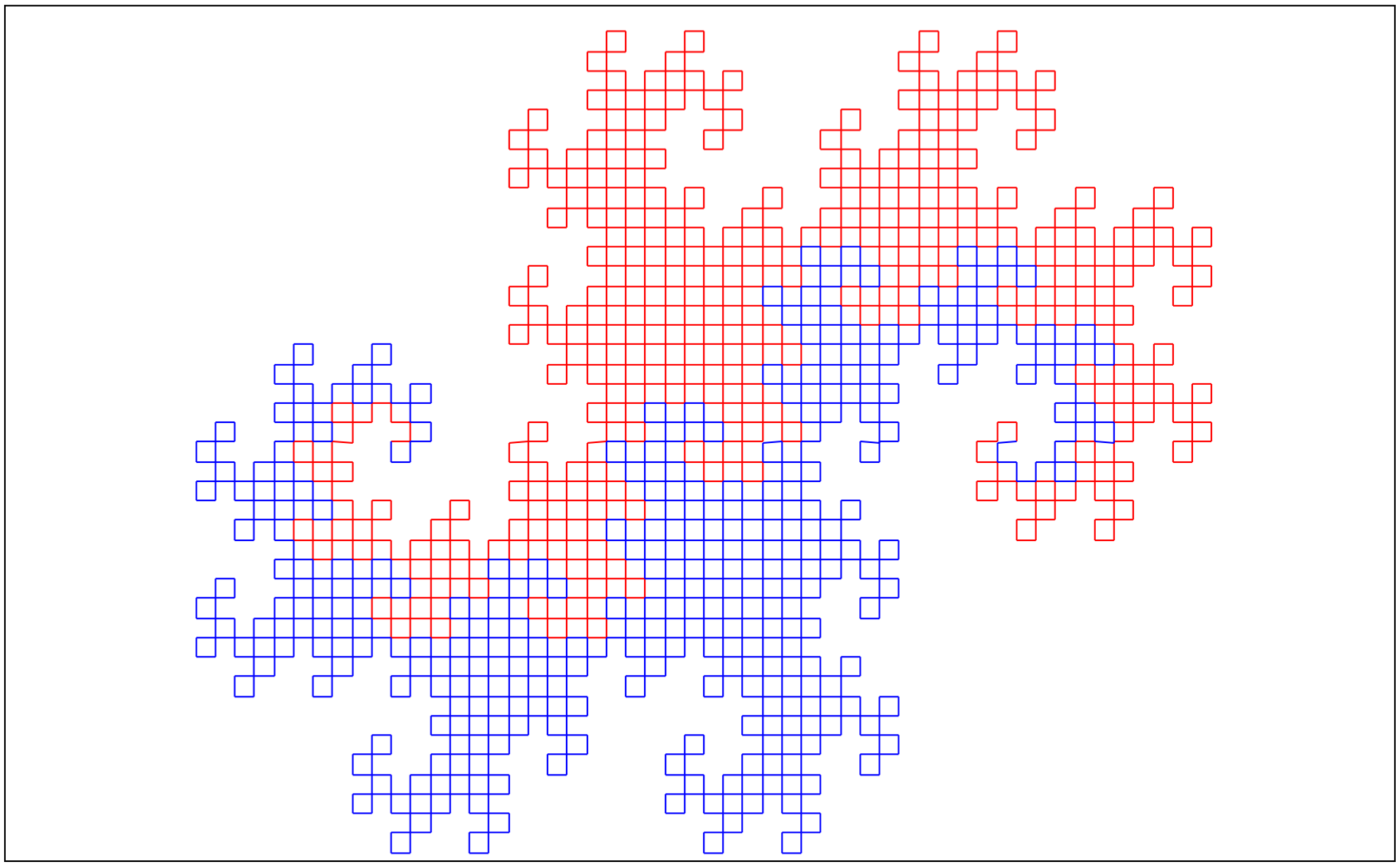
Dragon - recursively calculates the points of the Dragon Curve

$$Dragon(x0, y0, x1, y1, orientation, order) :=$$
$$c := \frac{1}{\sqrt{2}}$$
$$xm := x0 + (x1 - x0) \cdot c$$
$$ym := y0 + (y1 - y0) \cdot c$$
$$r := x0 + (xm - x0) \cdot c - (ym - y0) \cdot c$$
$$s := y0 + (xm - x0) \cdot c + (ym - y0) \cdot c$$
$$t := x0 + (xm - x0) \cdot c + (ym - y0) \cdot c$$
$$u := y0 - (xm - x0) \cdot c + (ym - y0) \cdot c$$
if $order > 1$
  if $orientation = 0$
    $points := \mathrm{stack}(points, Dragon(x0, y0, r, s, 1, order - 1), Dragon(r, s, x1, y1, 0, order - 1))$
  else
    $points := \mathrm{stack}(points, Dragon(x0, y0, t, u, 1, order - 1), Dragon(t, u, x1, y1, 0, order - 1))$
else
  $points := \mathrm{stack}(points, [\, x1 \;\; y1 \,])$

dragon - assigns points variable with start point(x0,y0) then appends the Dragon curve. This method minimises the number of plot points.

$$dragon(x0, y0, x1, y1, orientation, order) :=$$
$$points := \mathrm{stack}(points, [\, x0 \;\; y0 \,], Dragon(x0, y0, x1, y1, orientation, order))$$
$$points$$

$M := dragon(-20, 0, 20, 0, 1, 11)$ $N := dragon(-20, 0, 20, 0, 0, 11)$ $\mathrm{length}(M) = 2050$



$\{ M, N$