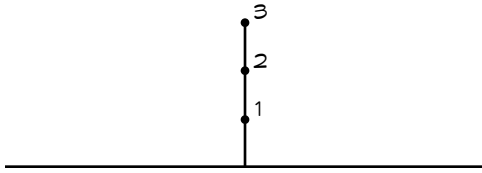
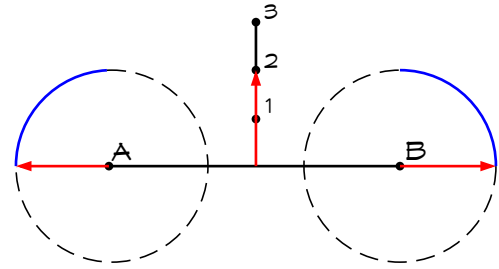


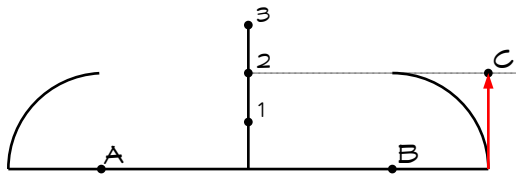
DRAWING A 4-CENTERED ARCH WITH A KNOWN HEIGHT AND WIDTH



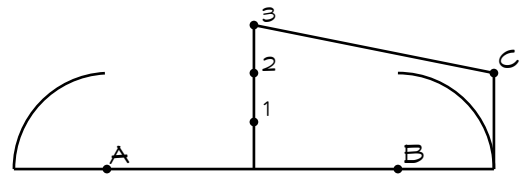
Step 1: Draw out the spring line and a perpendicular height line at the spring line's midpoint. Then divide the height line into three equal segments.



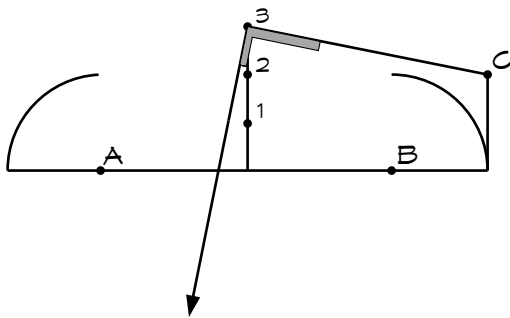
Step 2: Using a distance equal to $\frac{2}{3}$ the the arch's height, measure in from each endpoint and mark points A and B on the spring line. Then draw quarter arcs using A and B as centers.



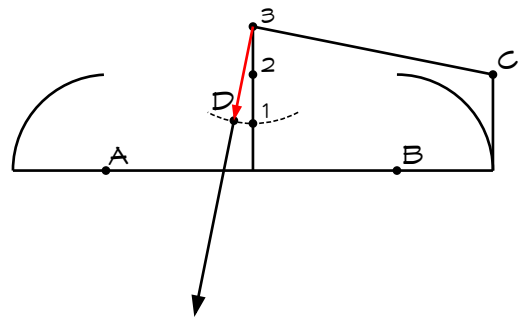
Step 3: Locate point C by drawing a perpendicular line from an end point of the spring line, measuring up $\frac{2}{3}$ the height of the arch.



Step 4: Use a straight edge to draw a line connecting point C to point 3.

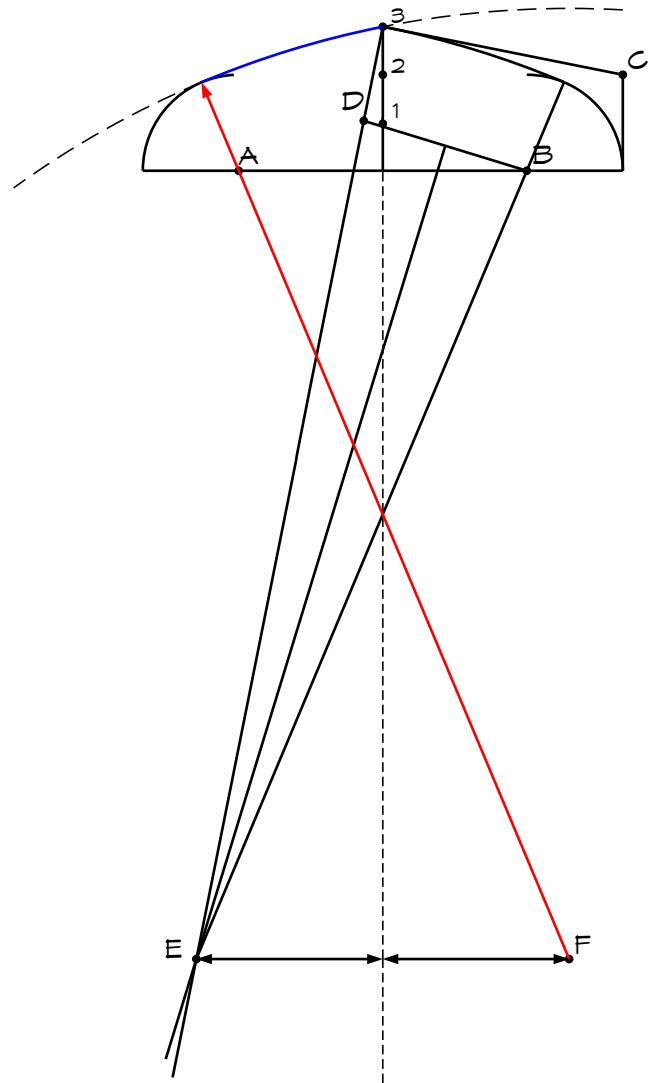
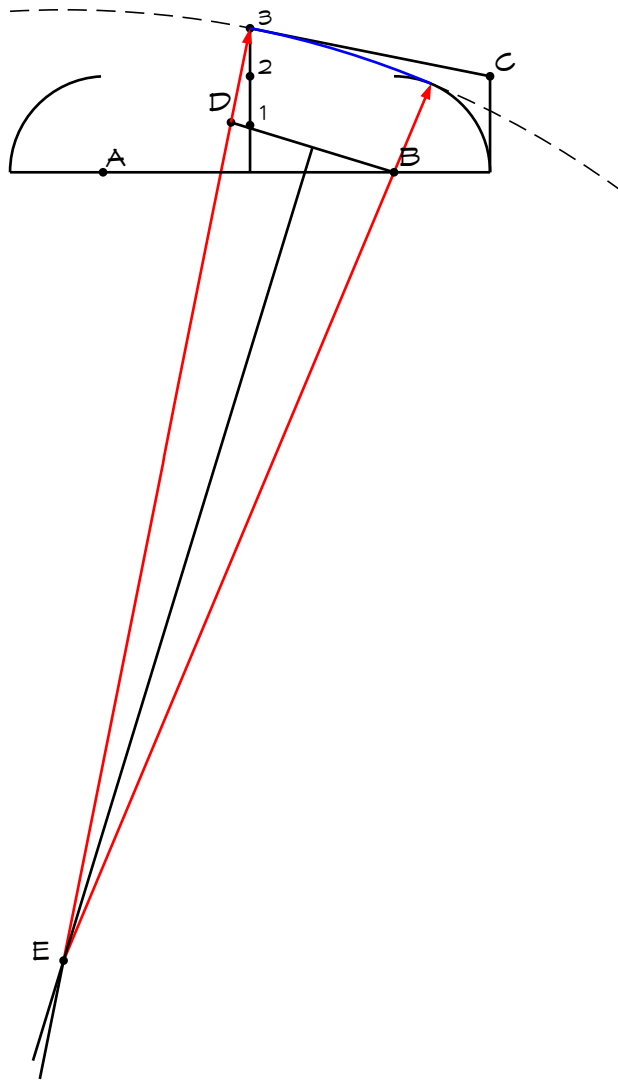


Step 5: Draw an extended line from point 3, perpendicular to the line 3C.



Step 6: Locate point D on the extended perpendicular line from step 6 by measuring down a distance of $\frac{2}{3}$ the arch's height.

DRAWING A 4-CENTERED ARCH WITH A KNOWN HEIGHT AND WIDTH



Step 9: Using point E as a center, draw an arc with a radius of E3 to close off half of the arch.

Step 10: Locate point F along a line parallel to the spring line, extending from point E, an equal distance from the extended center line. Close off the arch using F as a center and the same E3 radius.