Draw the Seed of Life with one compass setting

Keep the radius r unchanged.

Current circle — Earlier construction --- Guide line ◉ Compass needle (center)

◆ New point to mark ● Marked point

STEP 1

Mark O.

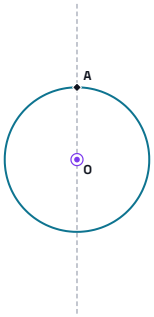
Mark a center point O. Draw a light vertical guide through it.



STEP 2

Draw the first circle.

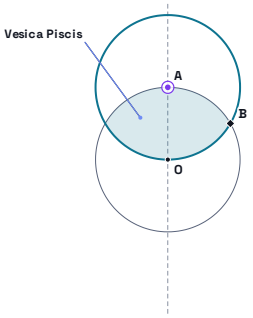
Needle on O, radius r. Mark A where the circle crosses the guide at the top.



STEP 3

Draw at A.

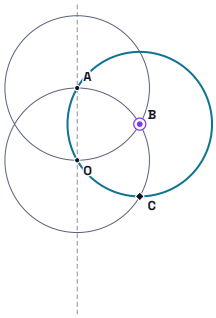
Needle on A, same radius. The lens-shaped overlap is the Vesica Piscis. Mark B at the right-hand intersection with circle O.



STEP 4

Draw at B.

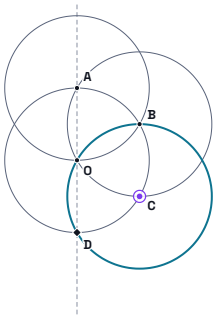
Needle on B. Mark C at the next clockwise intersection with circle O.



STEP 5

Draw at C.

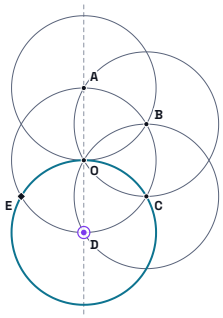
Needle on C. Mark D at the bottom of circle O.



STEP 6

Draw at D.

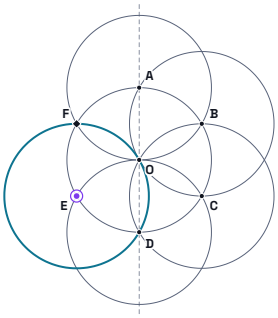
Needle on D. Mark E at the lower-left intersection with circle O.



STEP 7

Draw at E.

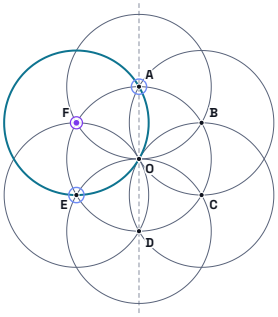
Needle on E. Mark F at the upper-left intersection with circle O.



STEP 8

Draw at F.

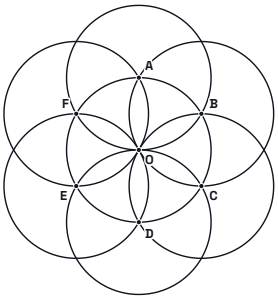
Needle on F. The last circle closes the pattern: it passes through A and E.



STEP 9

Check seven circles.

One central circle plus six around it. Every outer circle passes through O. There is no enclosing eighth circle.



Add twelve circles to make the Flower of Life

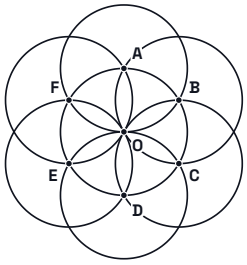
1 center + 6 in the first layer + 12 in the second = 19.

Current circle · Earlier construction · Guide line · Compass needle (center)
Distance from O · Marked point

STEP 1

Start from the Seed of Life.

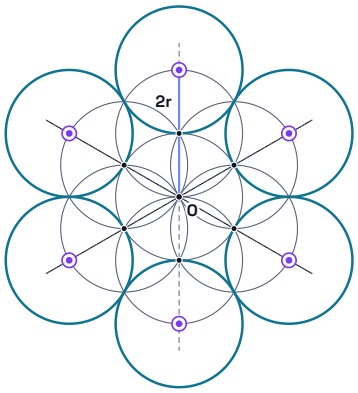
The seven circles from Figure 1: center O and outer centers A–F.



STEP 2

Add six axial circles.

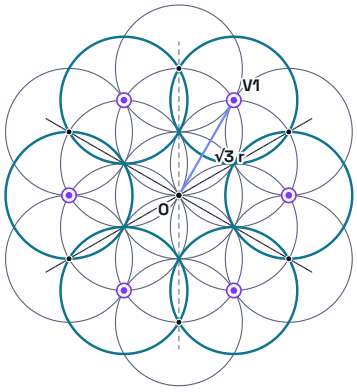
Extend rays O–A through O–F. Each ray crosses its outer circle again at 2r from O. Draw a circle of radius r at each of those six centers.

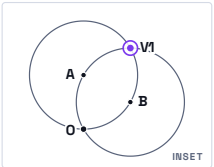


STEP 3

Add six between-ray circles.

Each neighboring pair of first-layer circles crosses at O and at one point away from O, √3 r from O. Use the point away from O. Draw six more circles.



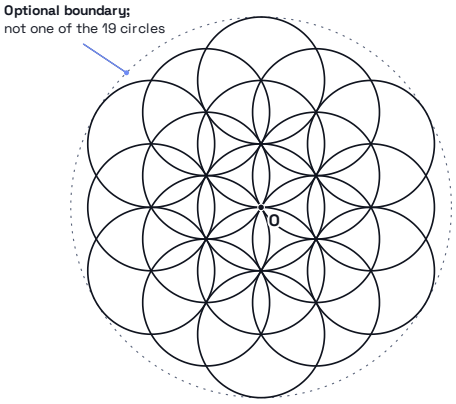


Circles A and B cross twice: at O and at V1. **Use V1, the crossing away from O.**

STEP 4

Check nineteen circles.

1 center + 6 in the first layer + 12 in the second = 19 equal circles. The petals are their intersections.



Select thirteen centers, then connect them

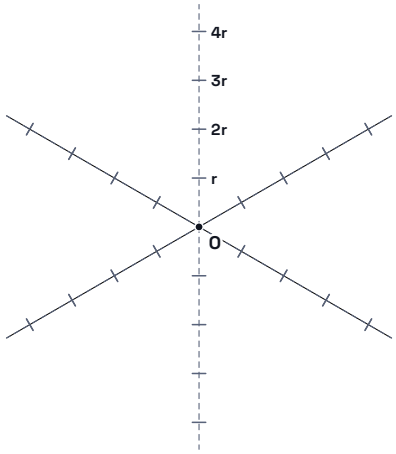
Keep the circle radius r. Use a larger sheet or a smaller radius.

Current circle · Earlier construction · Ray with r marks · Compass needle (center) · Center

STEP 1

Draw six rays and step off r.

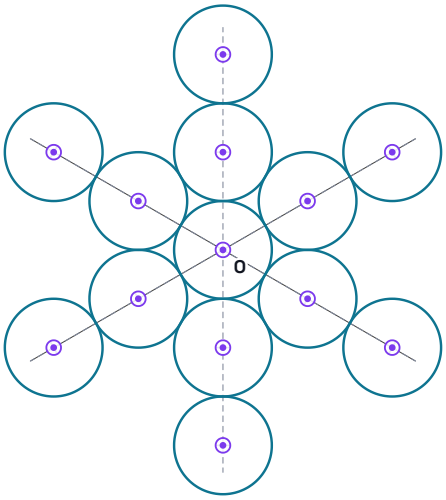
Draw six rays from O at 60° intervals. With the compass still set to r, step off r, 2r, 3r and 4r along each ray.



STEP 2

Draw thirteen circles.

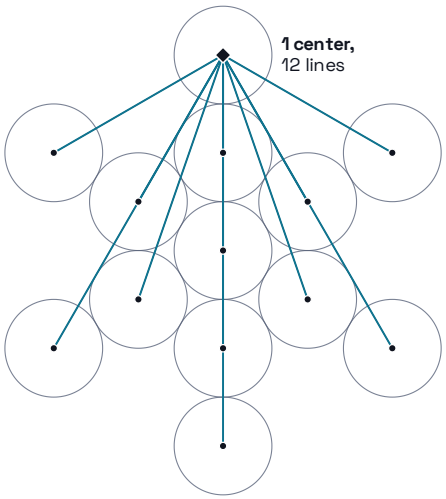
Select O, the six 2r points and the six 4r points. Draw a circle of radius r at each of these 13 centers only: the Fruit of Life.



STEP 3

Connect one center to the rest.

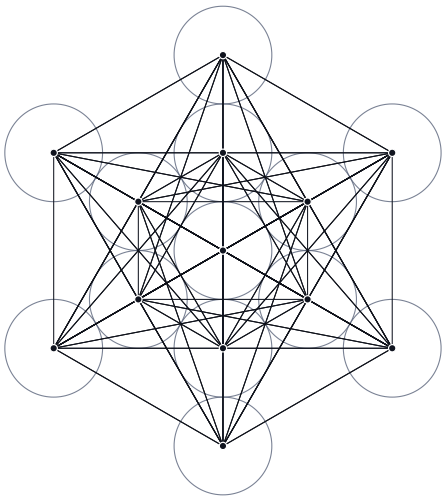
Use the straightedge to join one center to the other twelve. That is what one set of pairwise connections looks like.



STEP 4

Connect every pair.

78 pairwise connections. Some segments overlap on the same straight line.



Check the construction before you ink

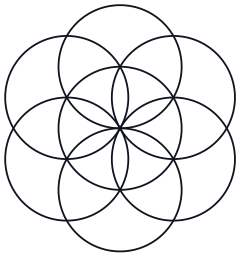
Each faulty example changes one thing only.

Accurate Faulty Callout

PAIR 1

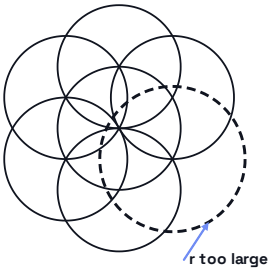
Keep one radius

Accurate



All seven circles use the same radius r.

Faulty

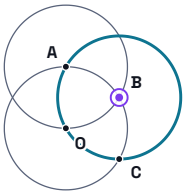


One outer circle is drawn too large. The petals around it become uneven.

PAIR 2

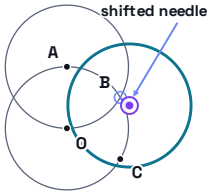
Use the intersection

Accurate



The needle sits exactly on B, where circles O and A cross.

Faulty

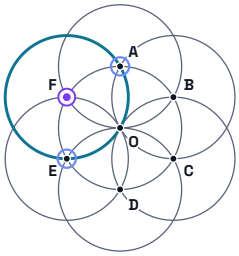


The needle is shifted off B, so the new circle misses A and C.

PAIR 3

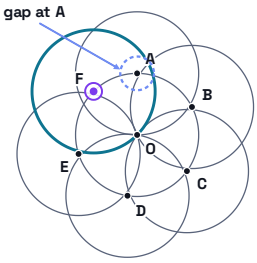
Let the ring close

Accurate



The sixth outer circle passes through A and E.

Faulty

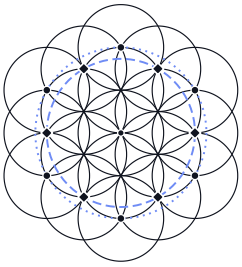


A small error at each step adds up and leaves a gap at A.

PAIR 4

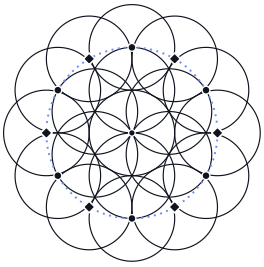
Use both sets of outer centers

Accurate



Six centers at 2r (dots) and six at √3 r (diamonds): two different distances.

Faulty



All twelve centers placed on one ring. The second layer no longer fits the first.