

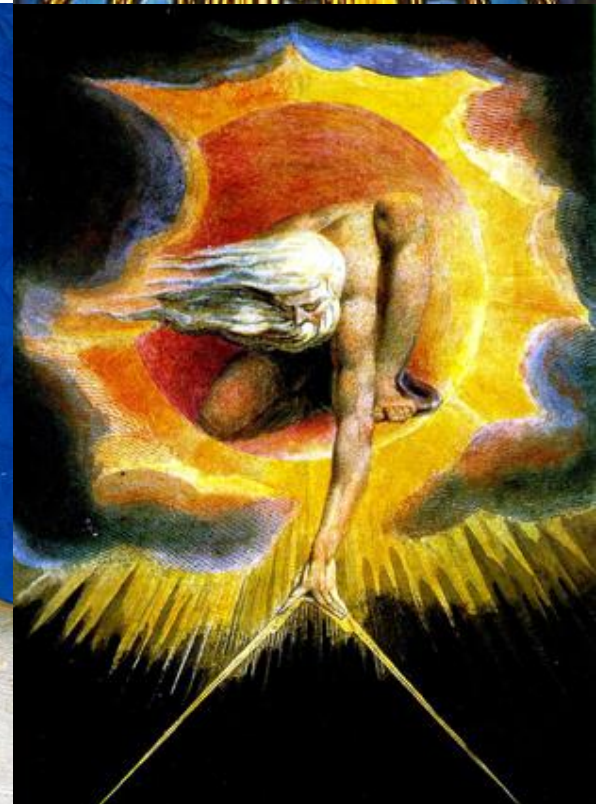
# SACRED GEOMETRY

*Exploring its Archetypal Language and Origins*

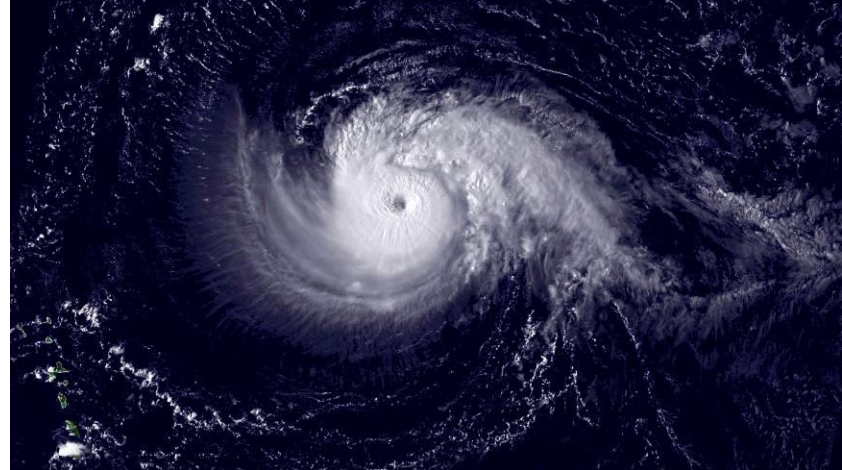
Prof. Brandon Ro, AIA, NCARB  
*Classical Architecture Workshop*

ORIGINS

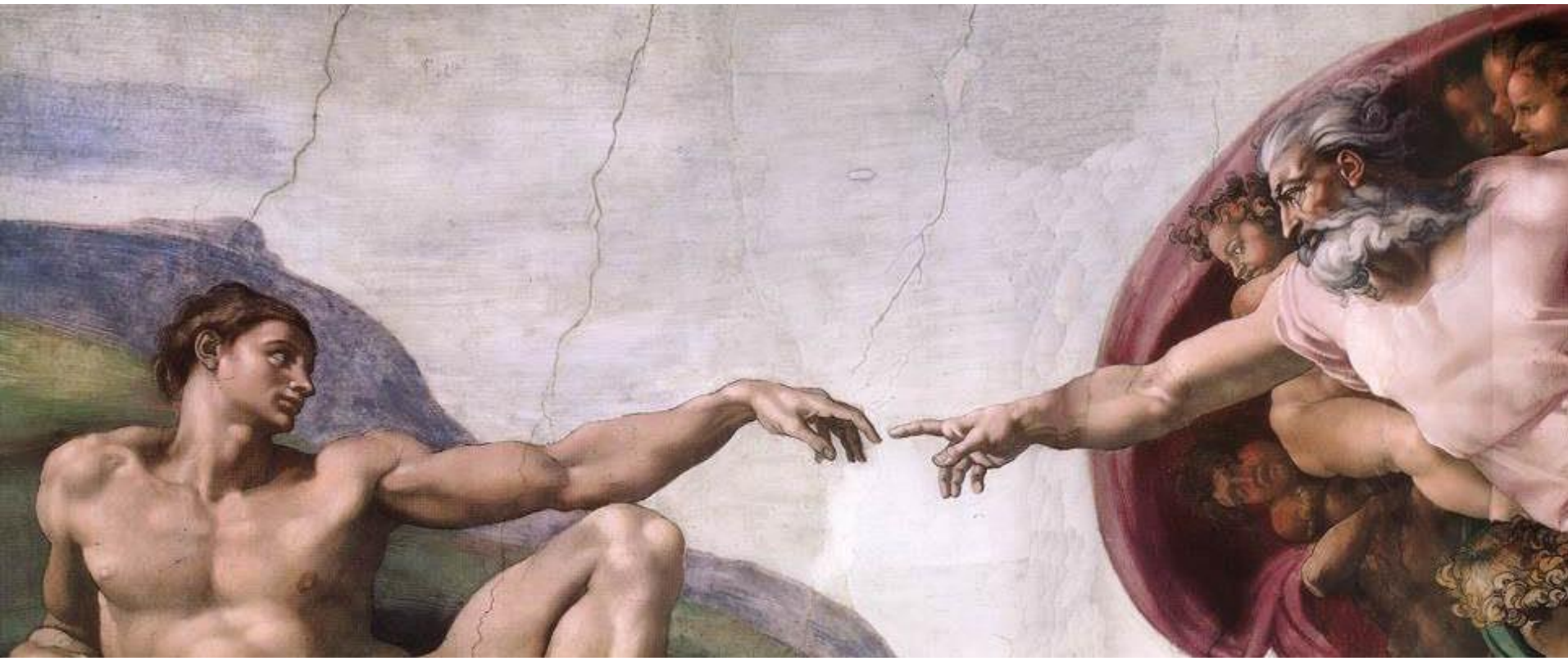














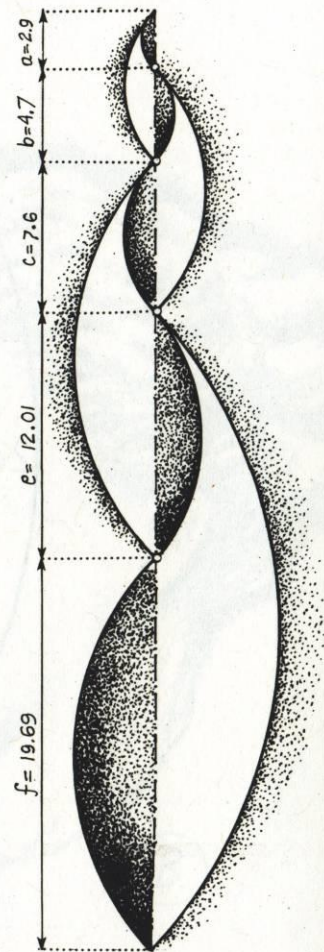
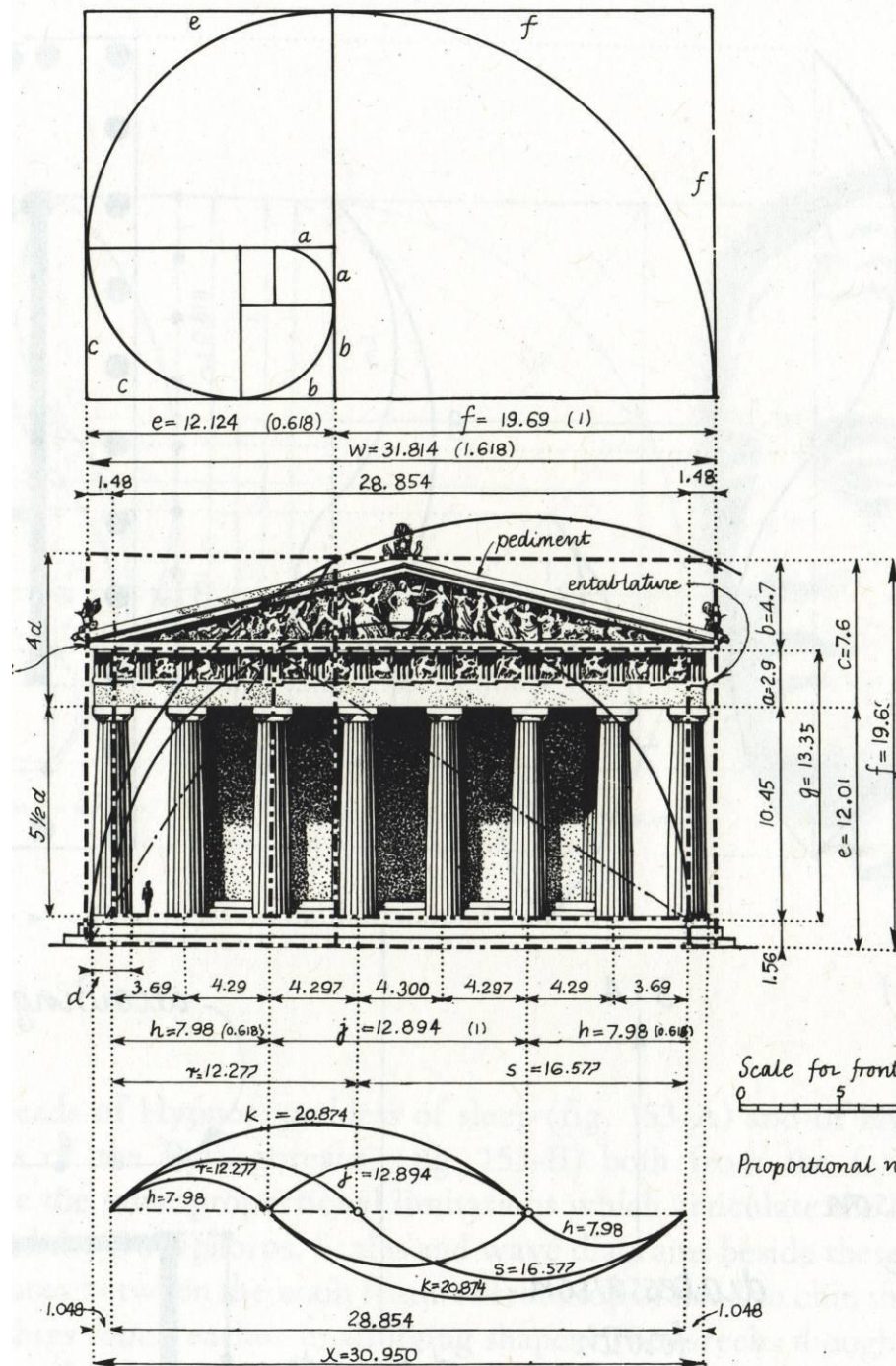
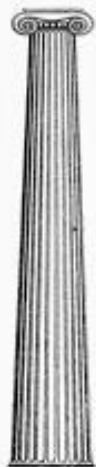
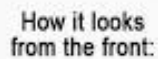


PAINTED BY T. COLE  
FOR L. TOWN, N.Y.

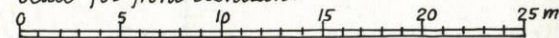








Scale for front elevation:



Proportional numbers in ( ).







MONAD

“1”

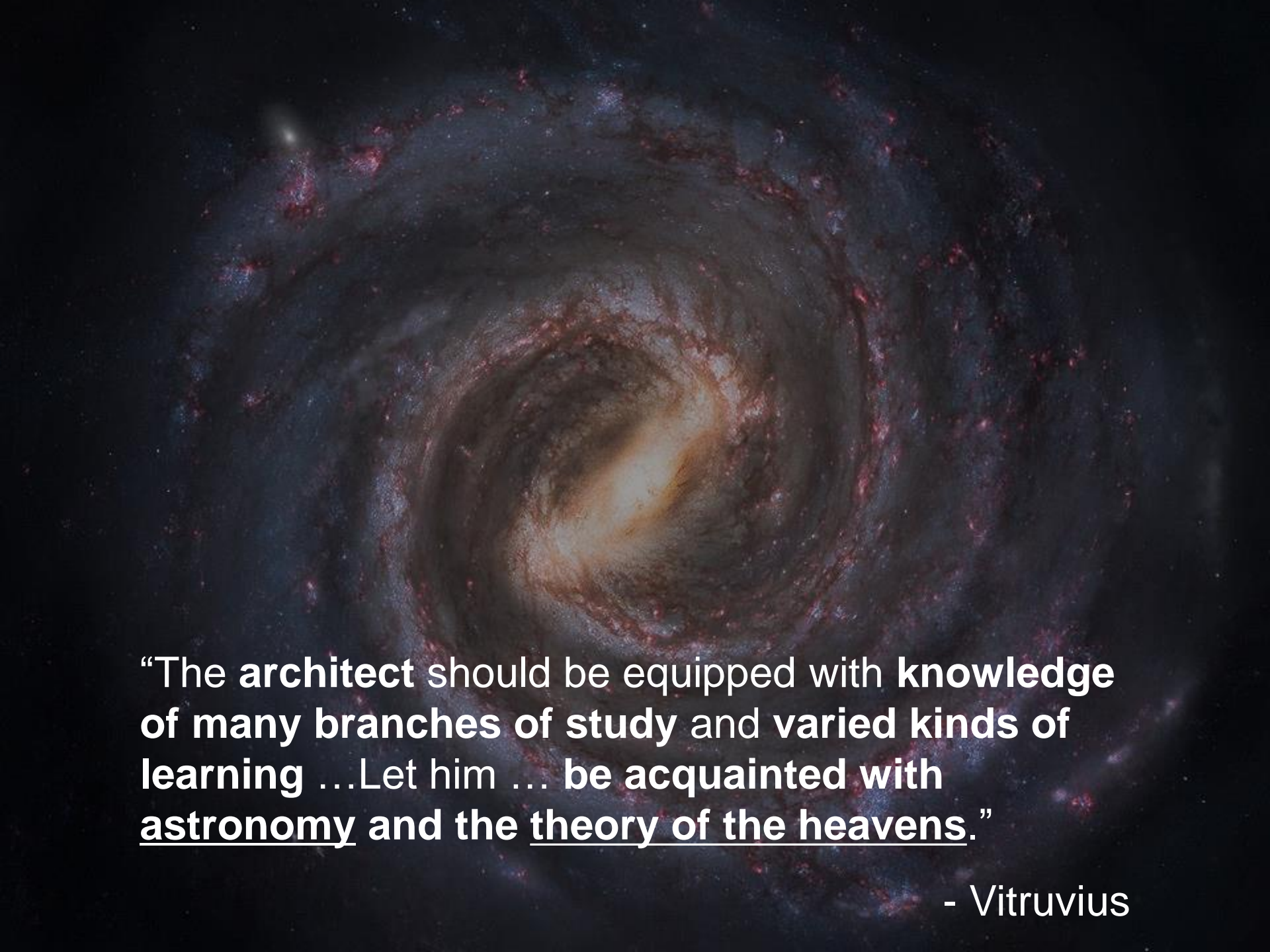












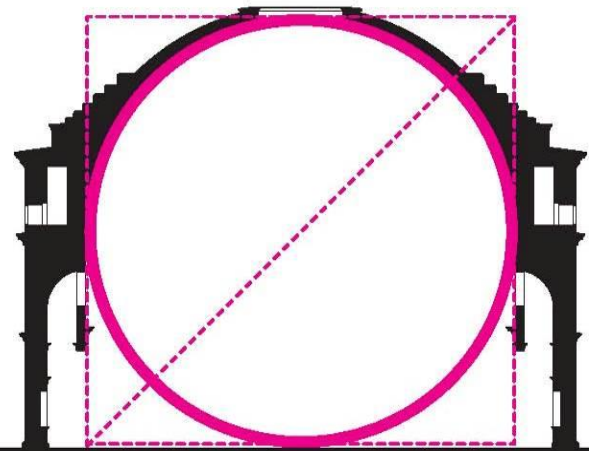
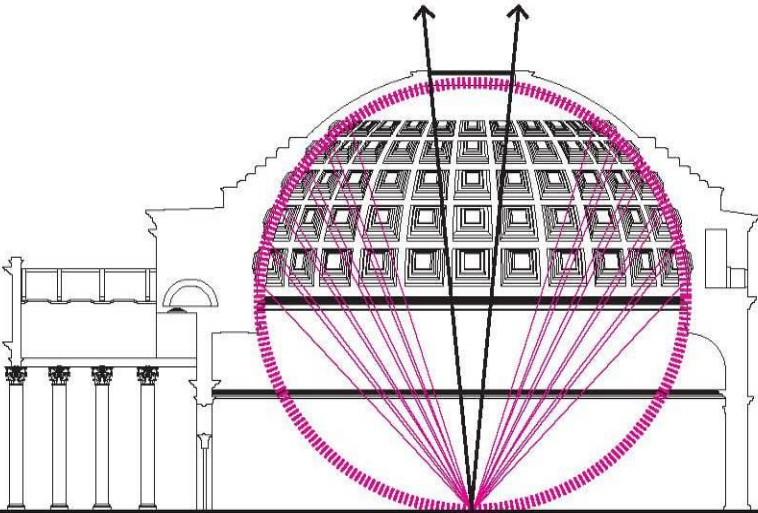
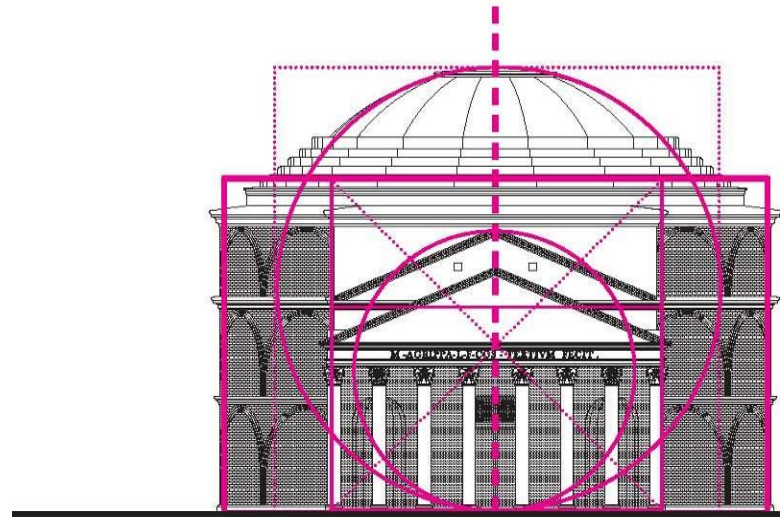
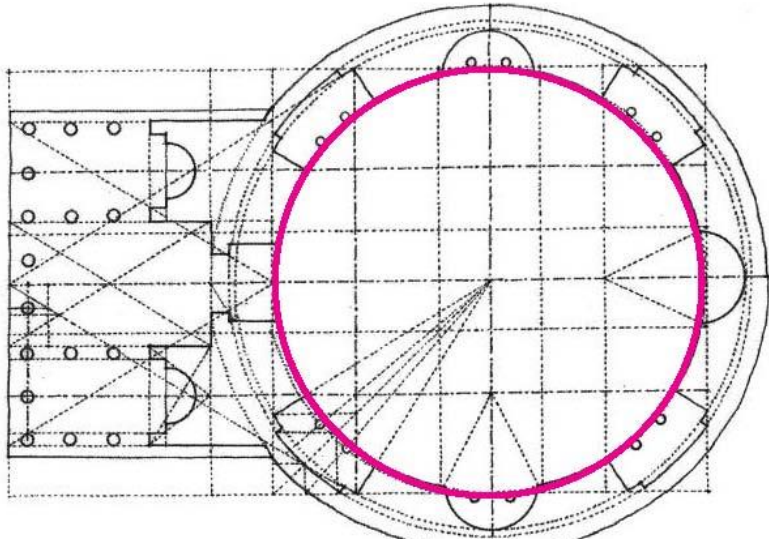
**“The architect should be equipped with knowledge of many branches of study and varied kinds of learning ...Let him ... be acquainted with astronomy and the theory of the heavens.”**

- Vitruvius











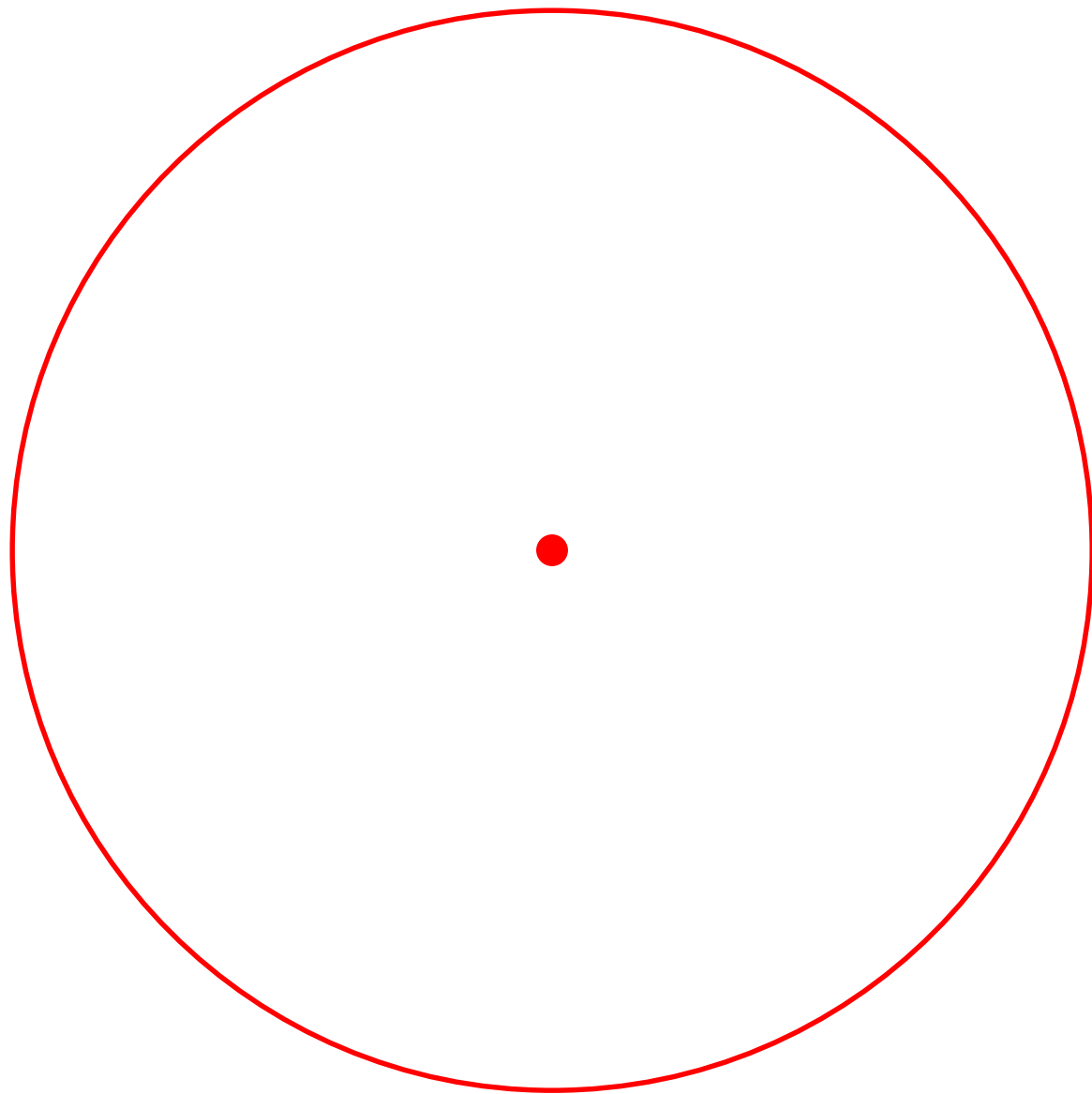






# How to Construct the Circle

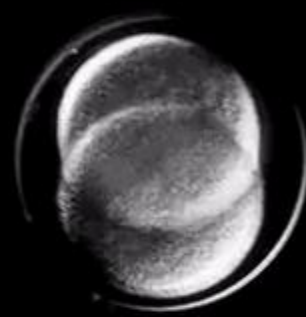
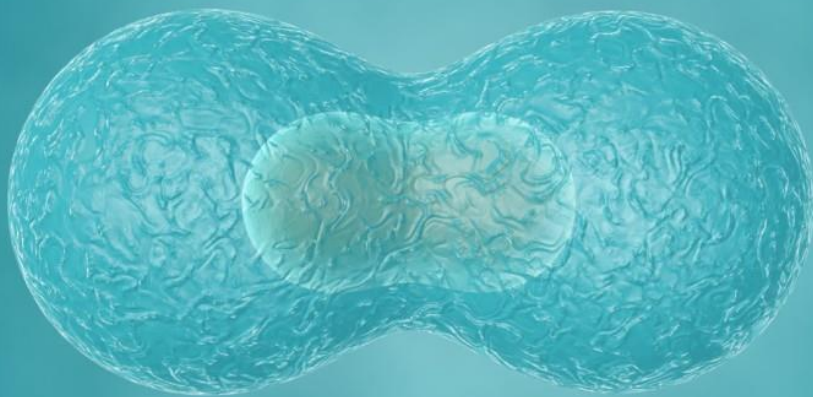






DYAD

“2”









mandorla



Vesica Piscis



August 9, 2015 at Fox Hill



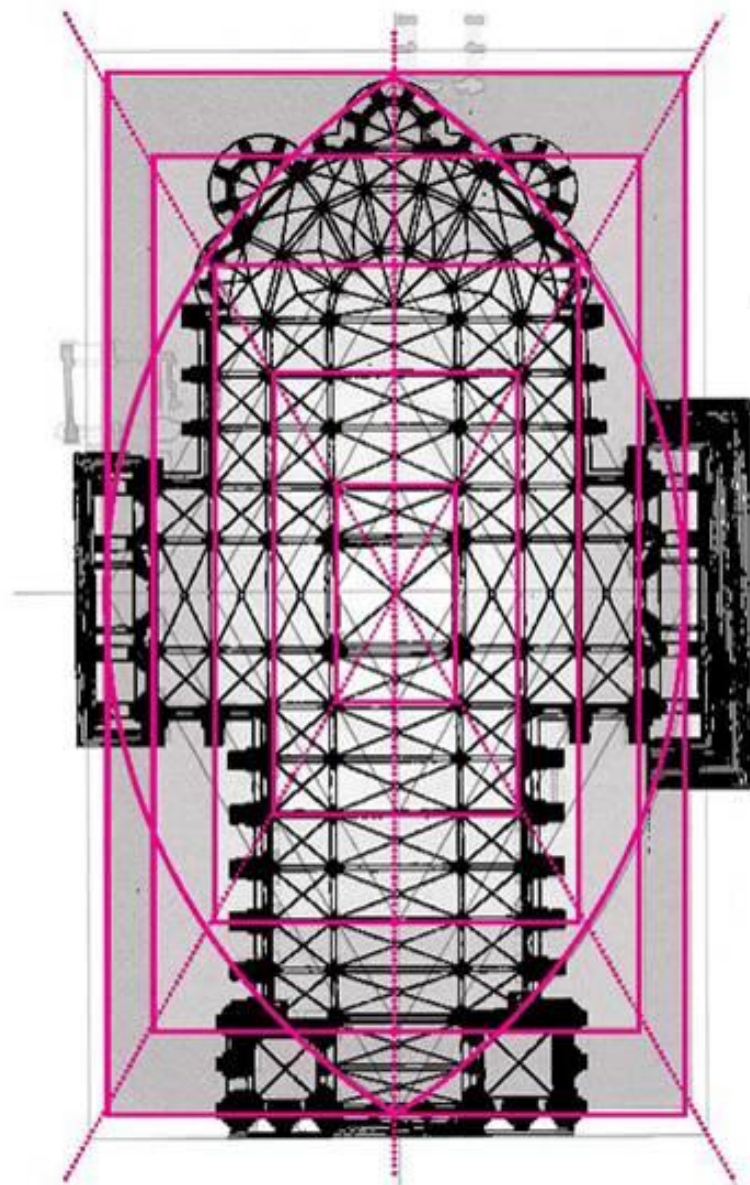
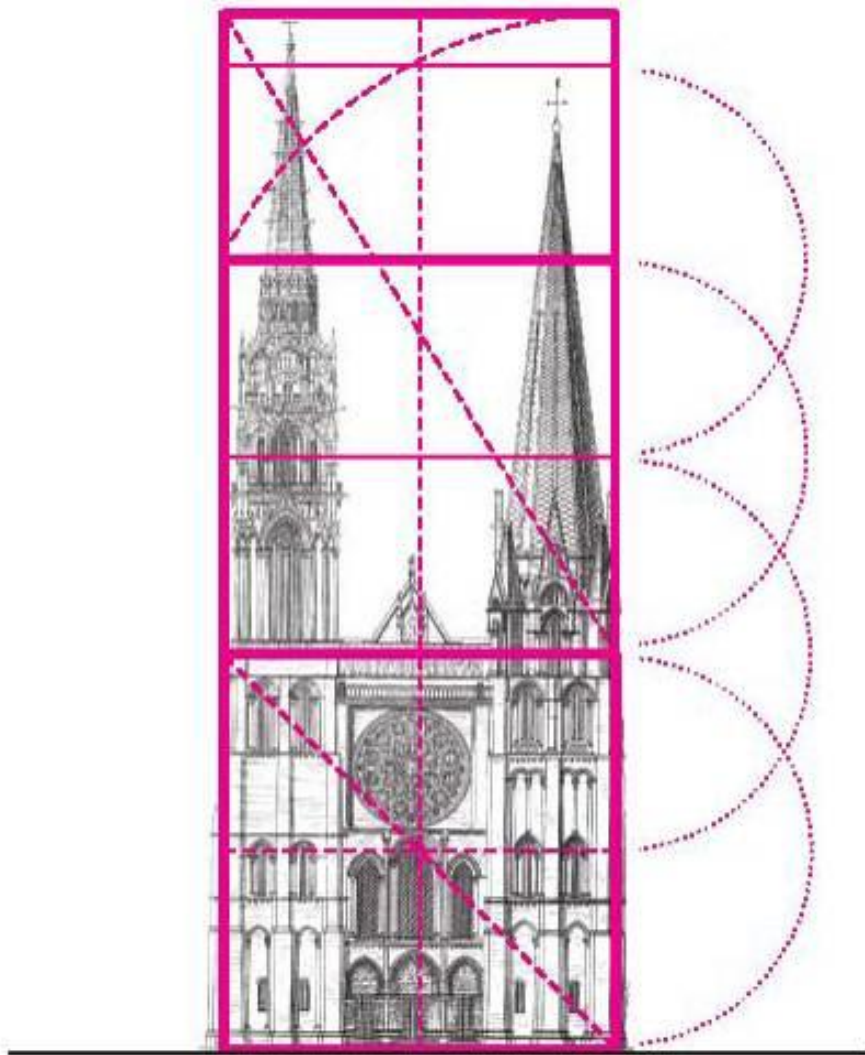
RC thanks to Lucy Pringle





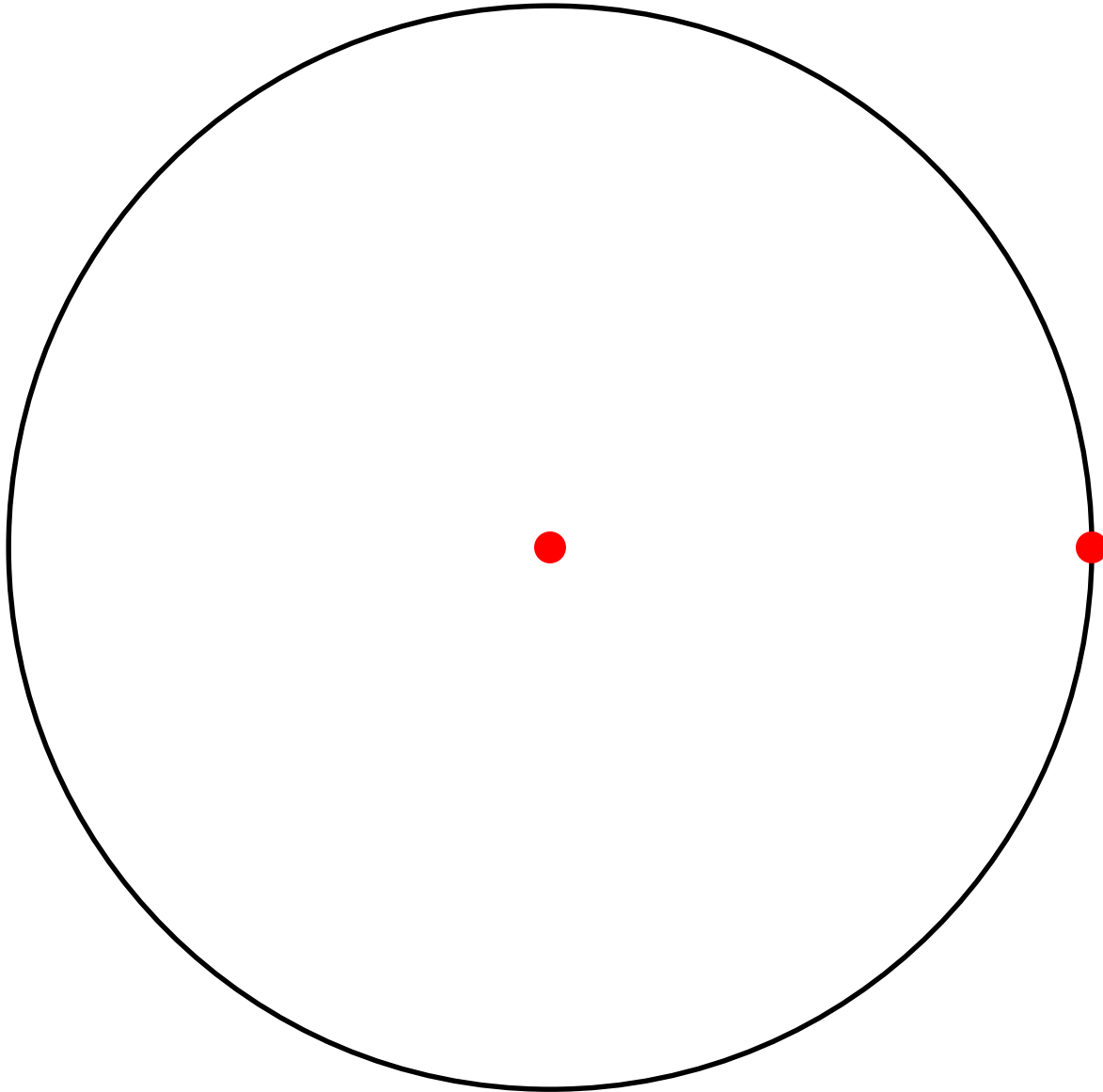


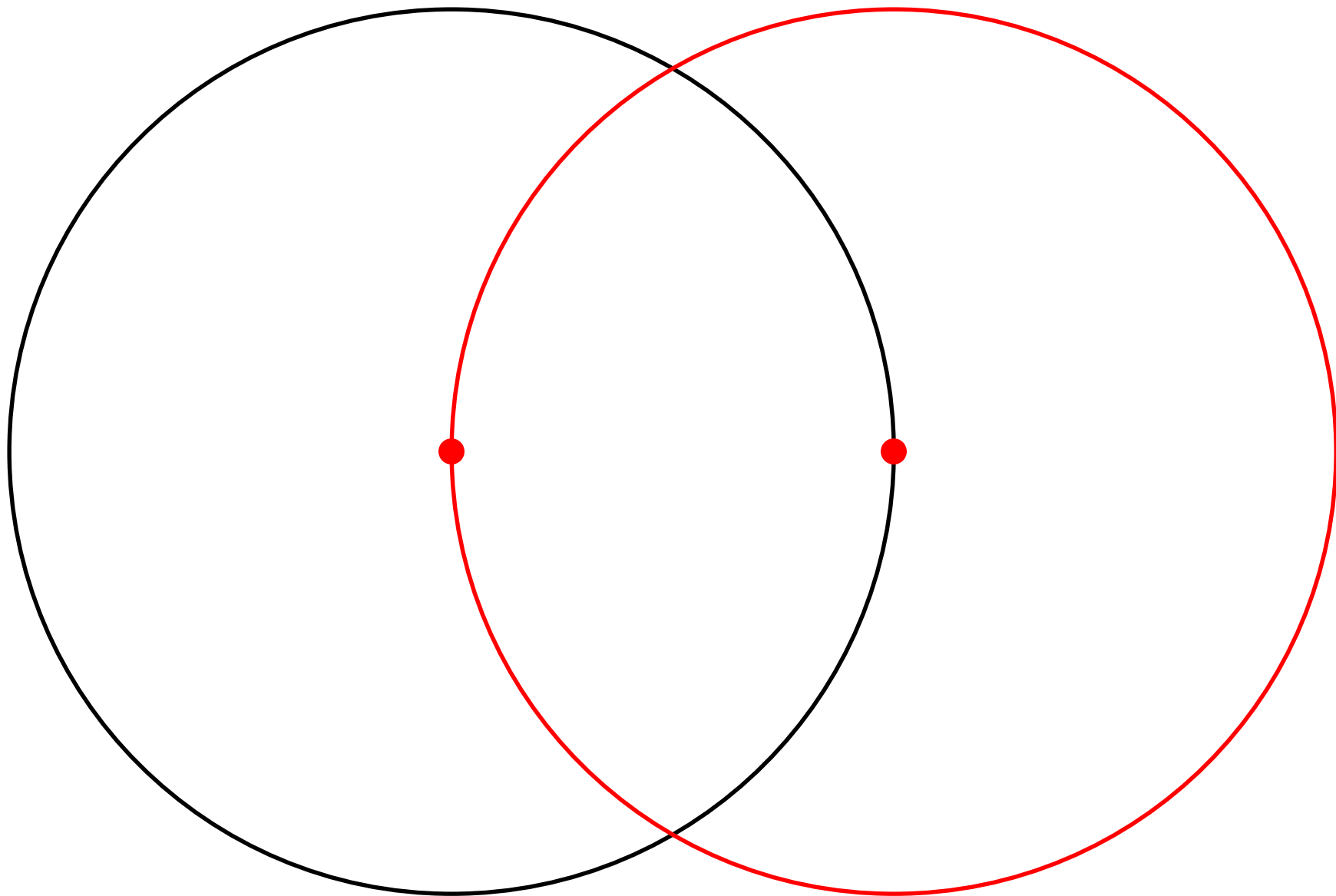




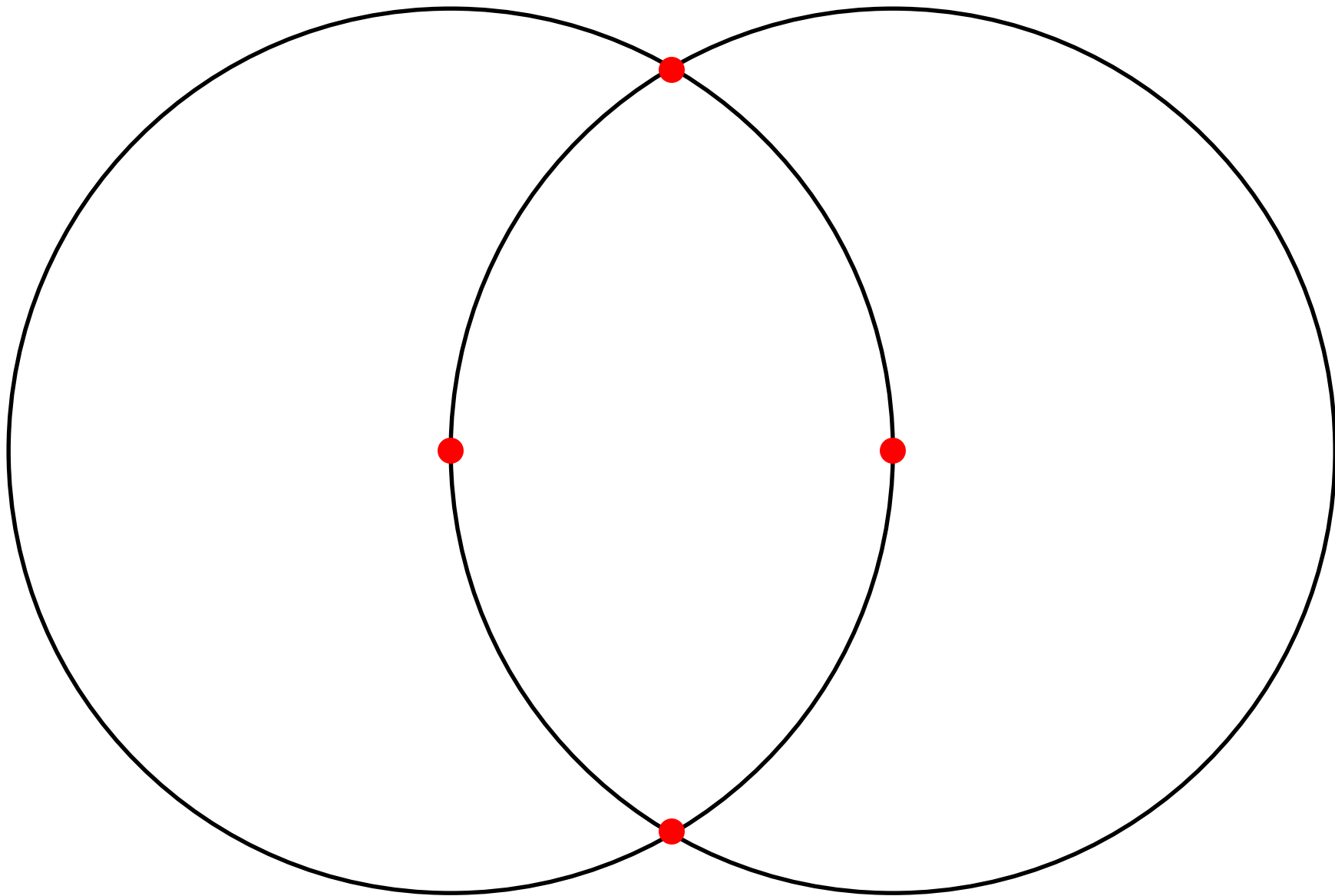


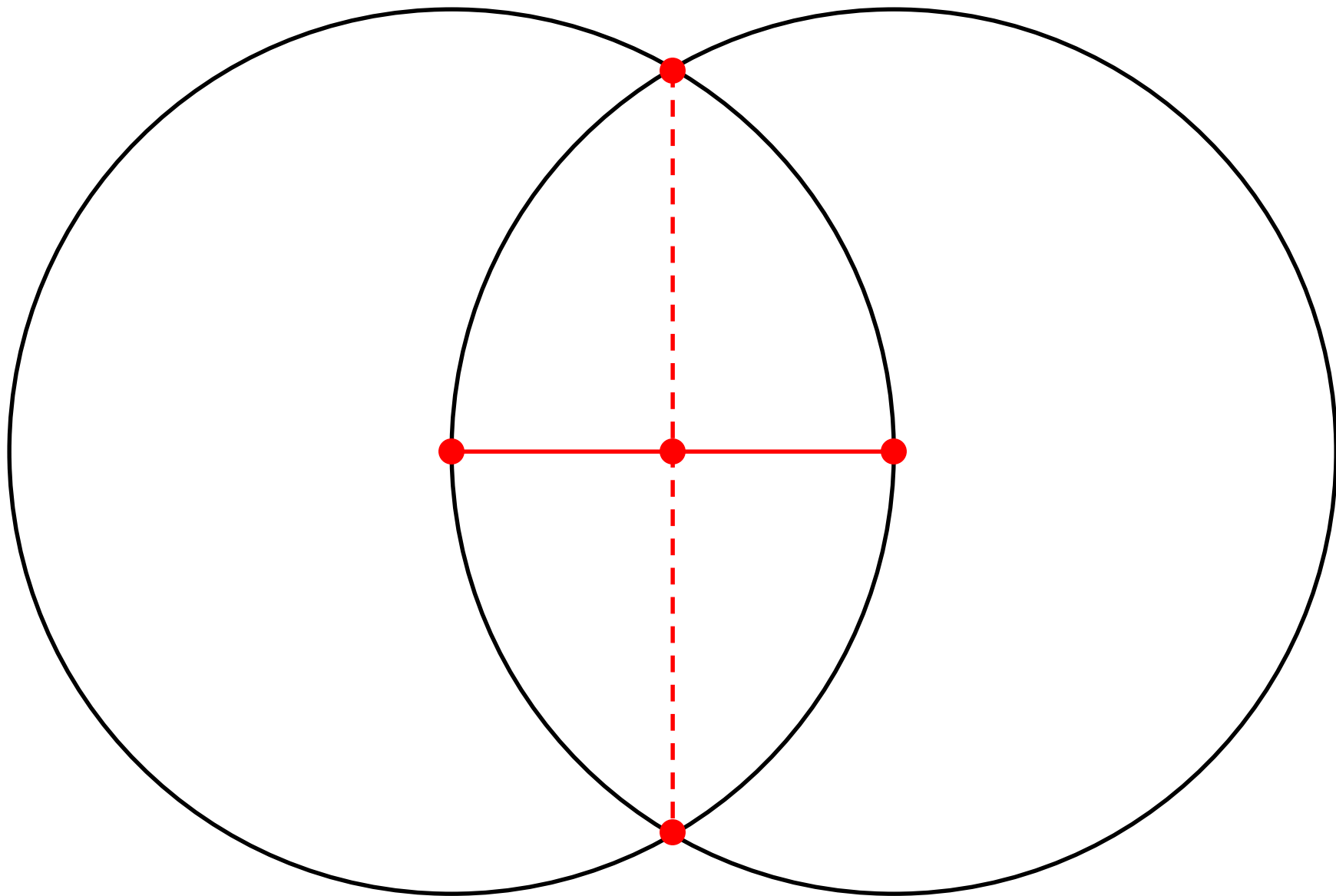
# How to Construct the Vesica Piscis and Line













TRIAD

“3”







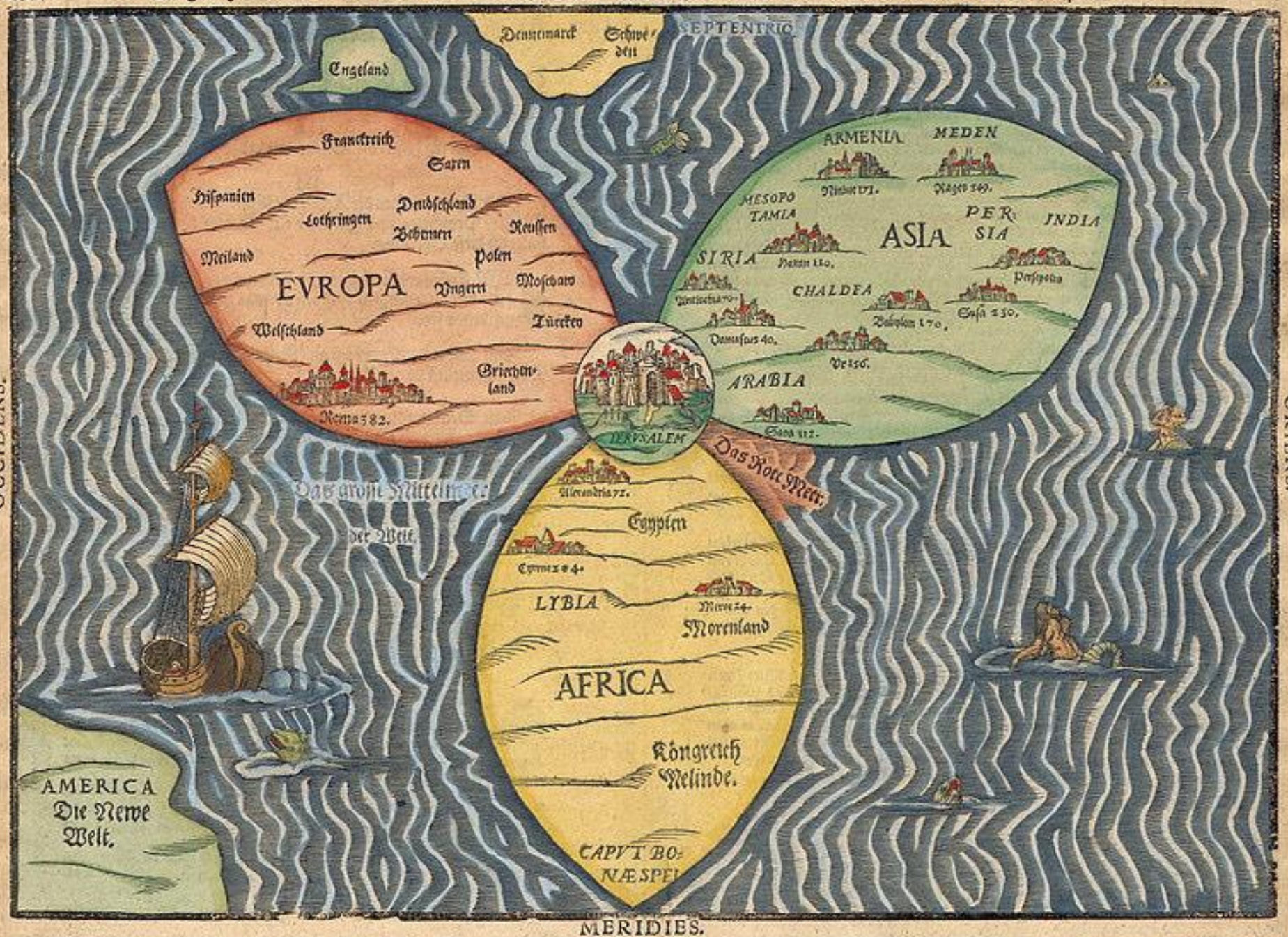








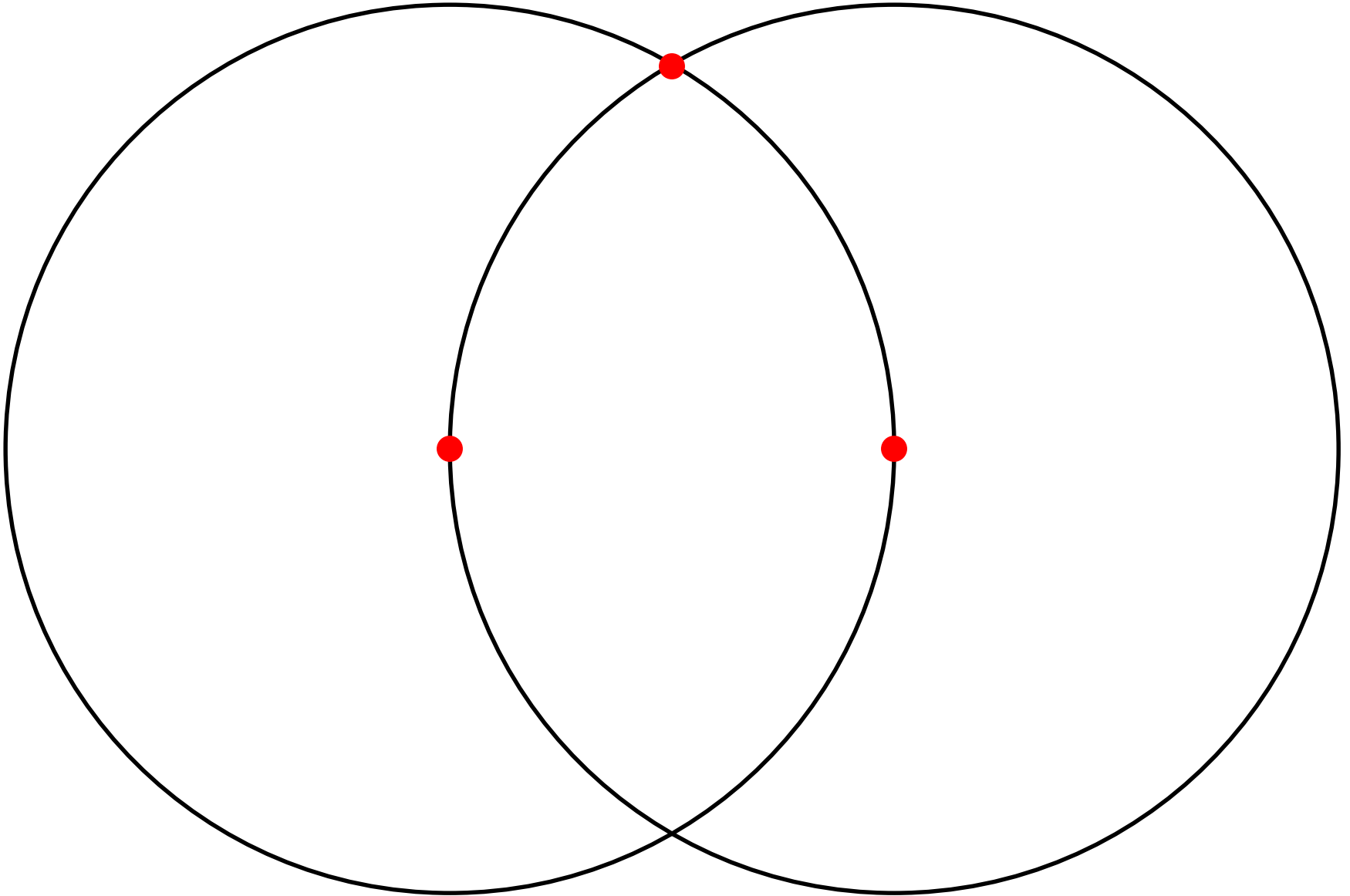




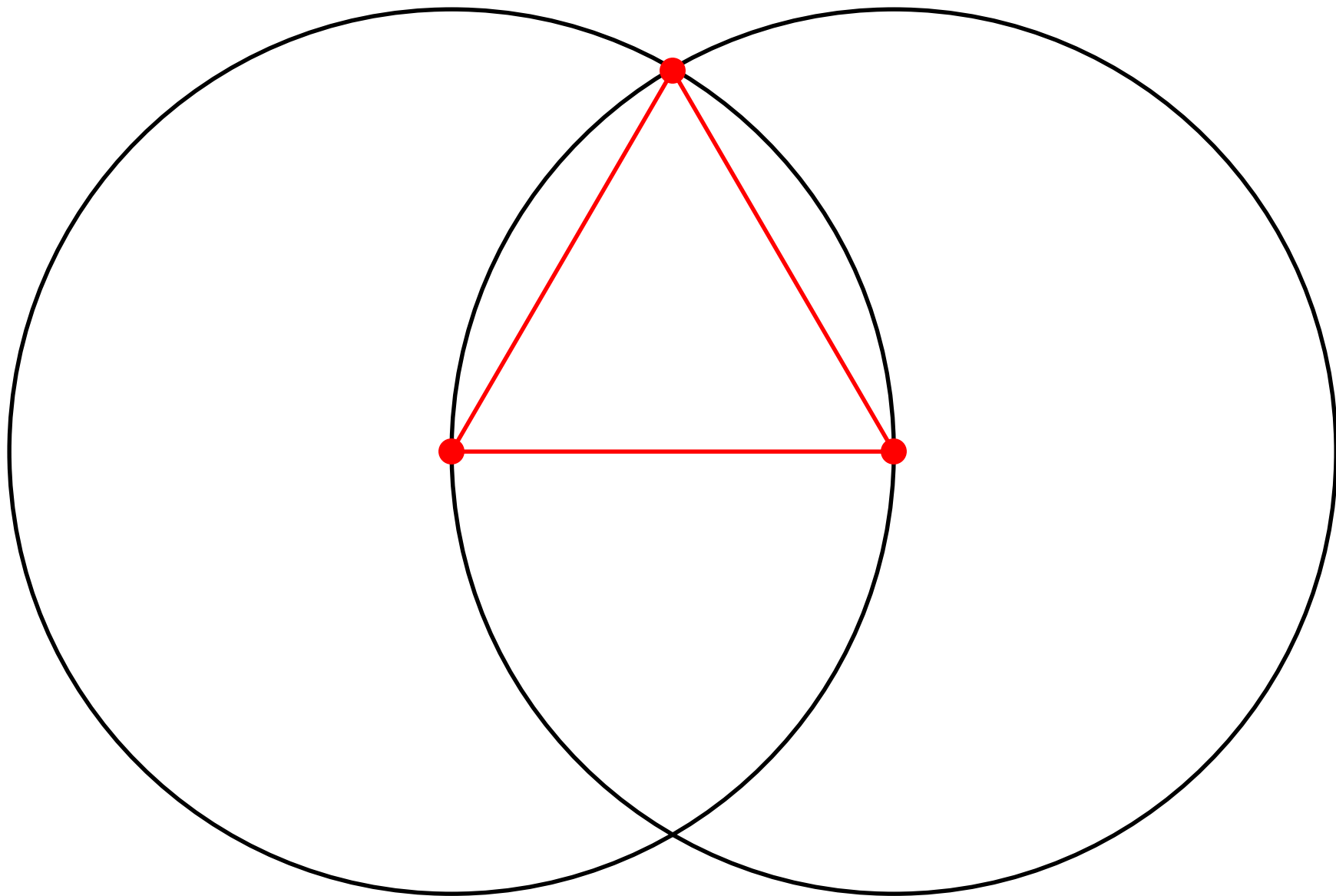


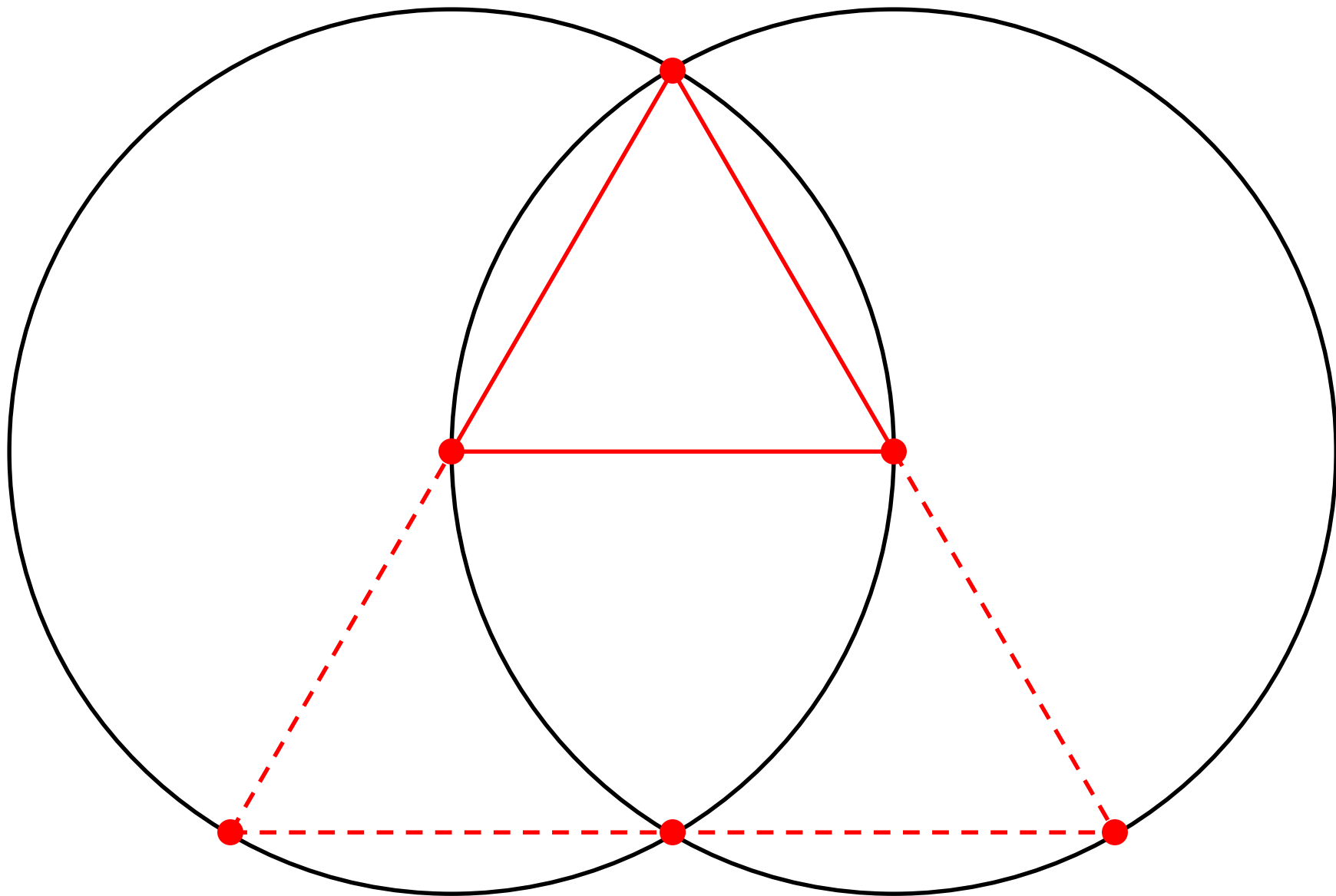


## How to Construct the Triangle

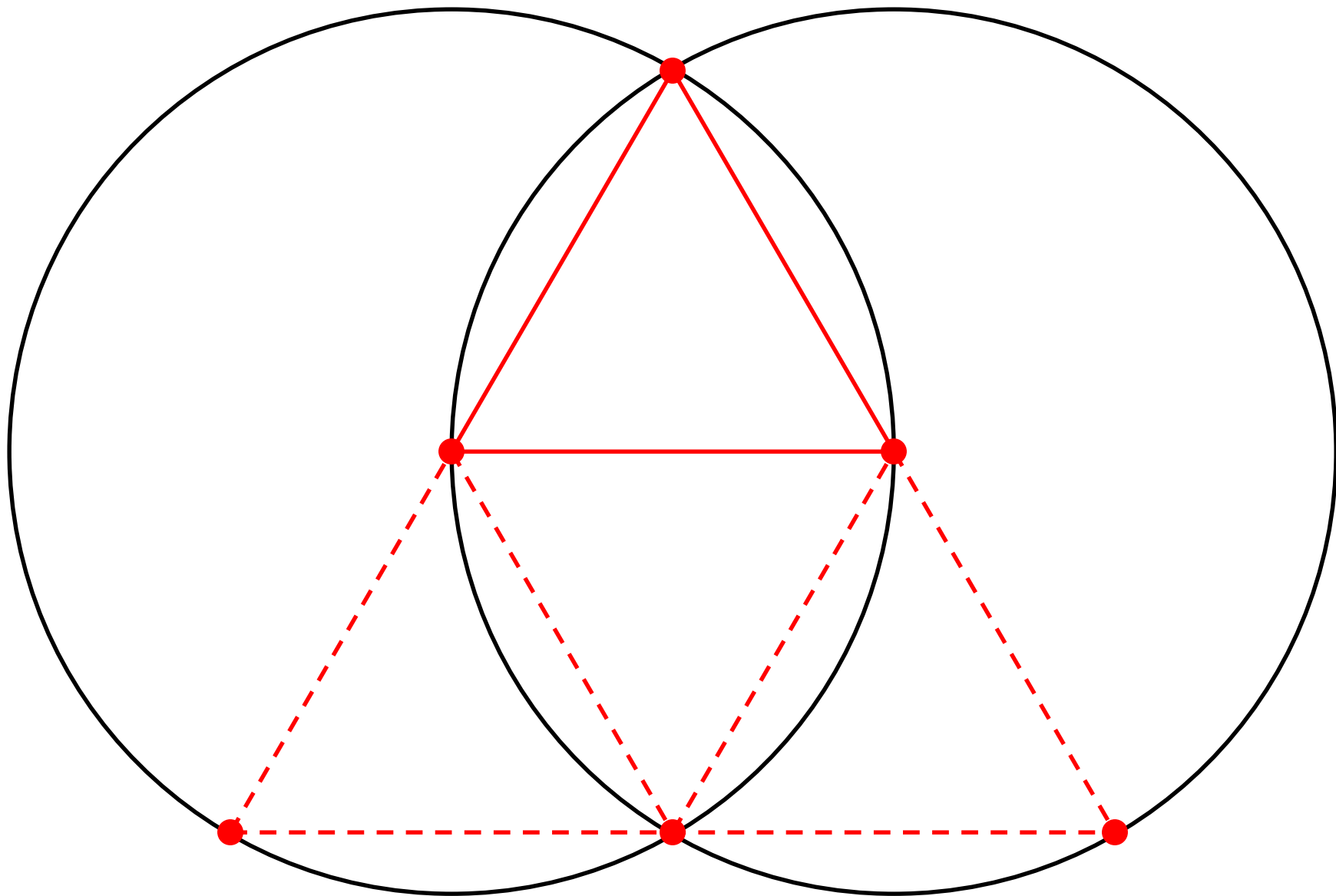












TETRAD

“4”

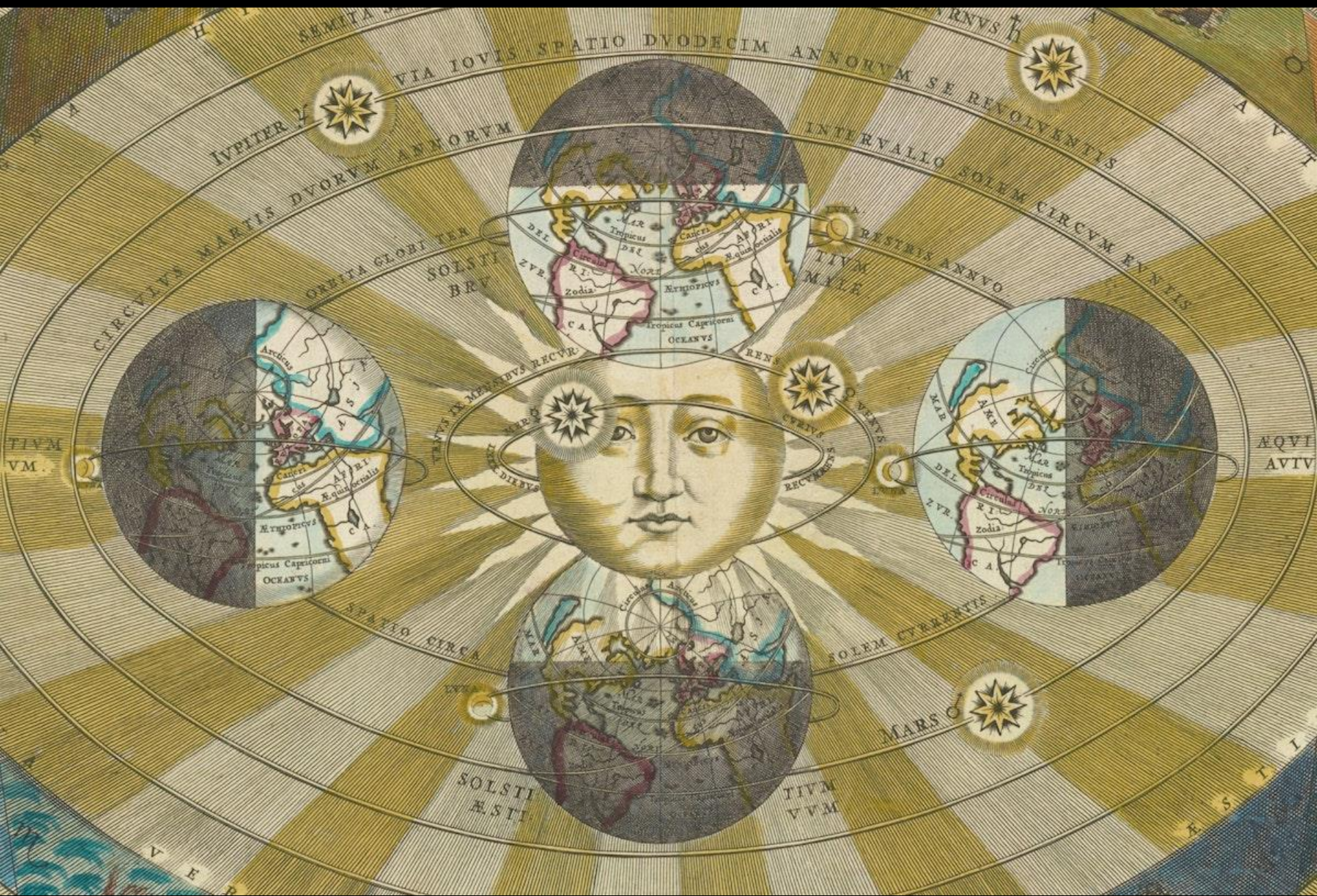




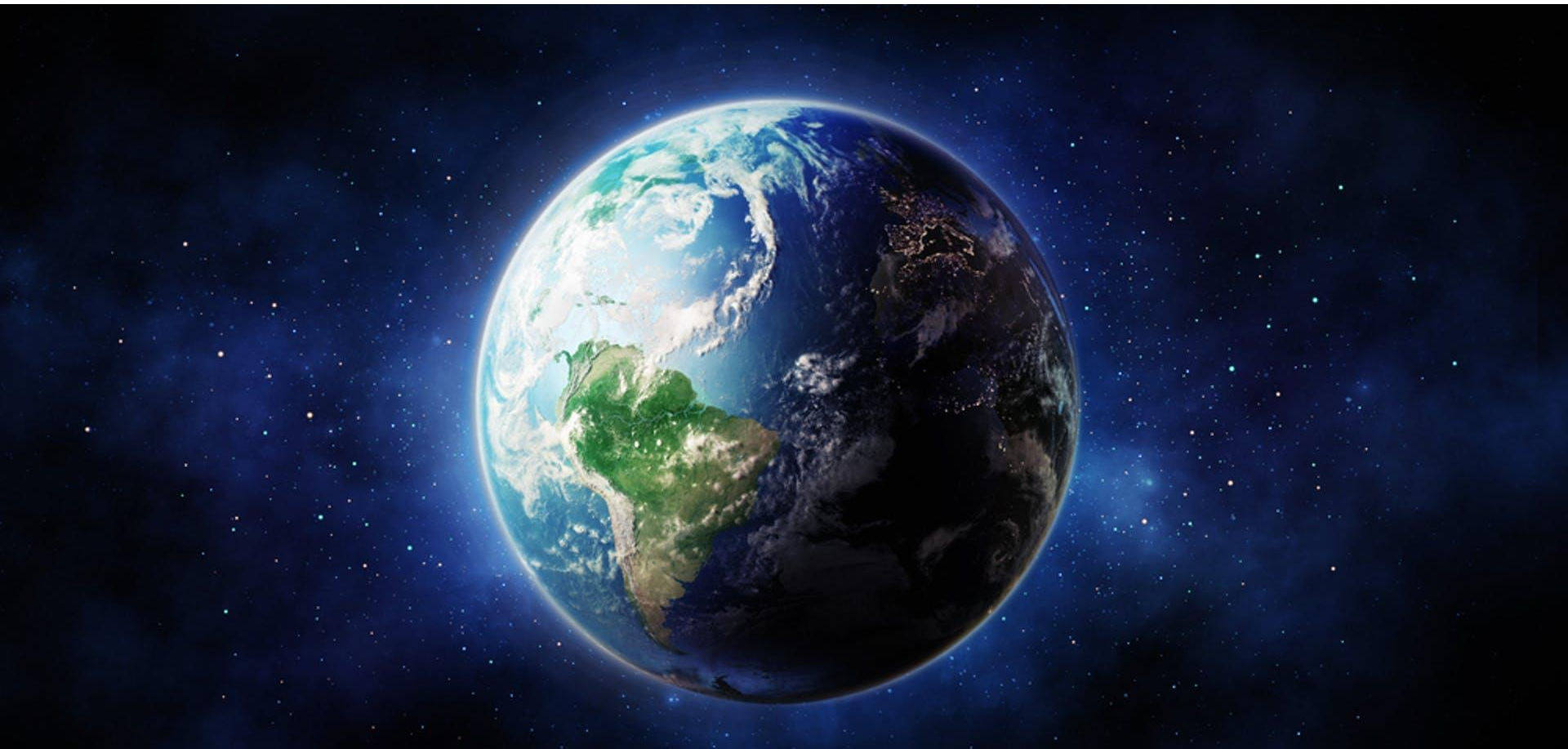
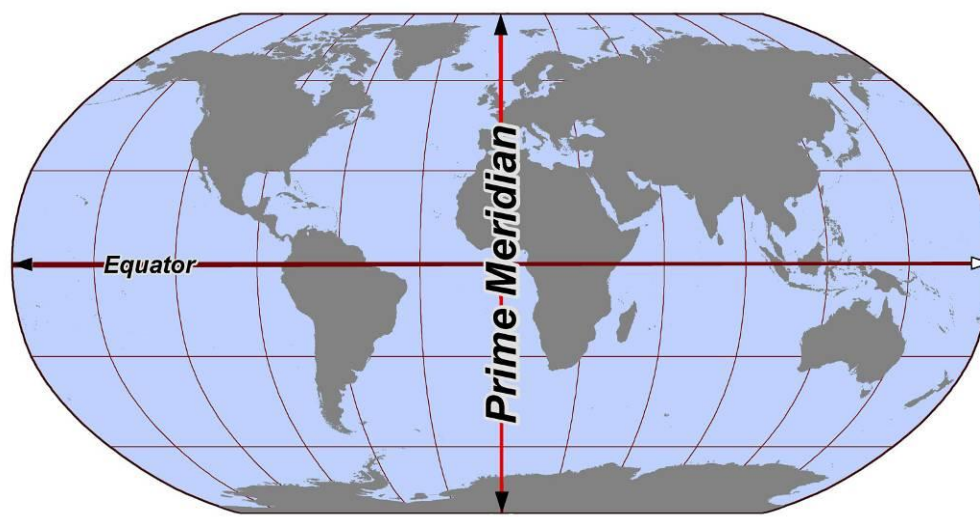








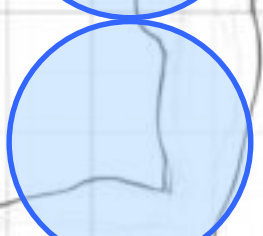
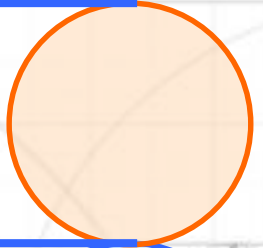
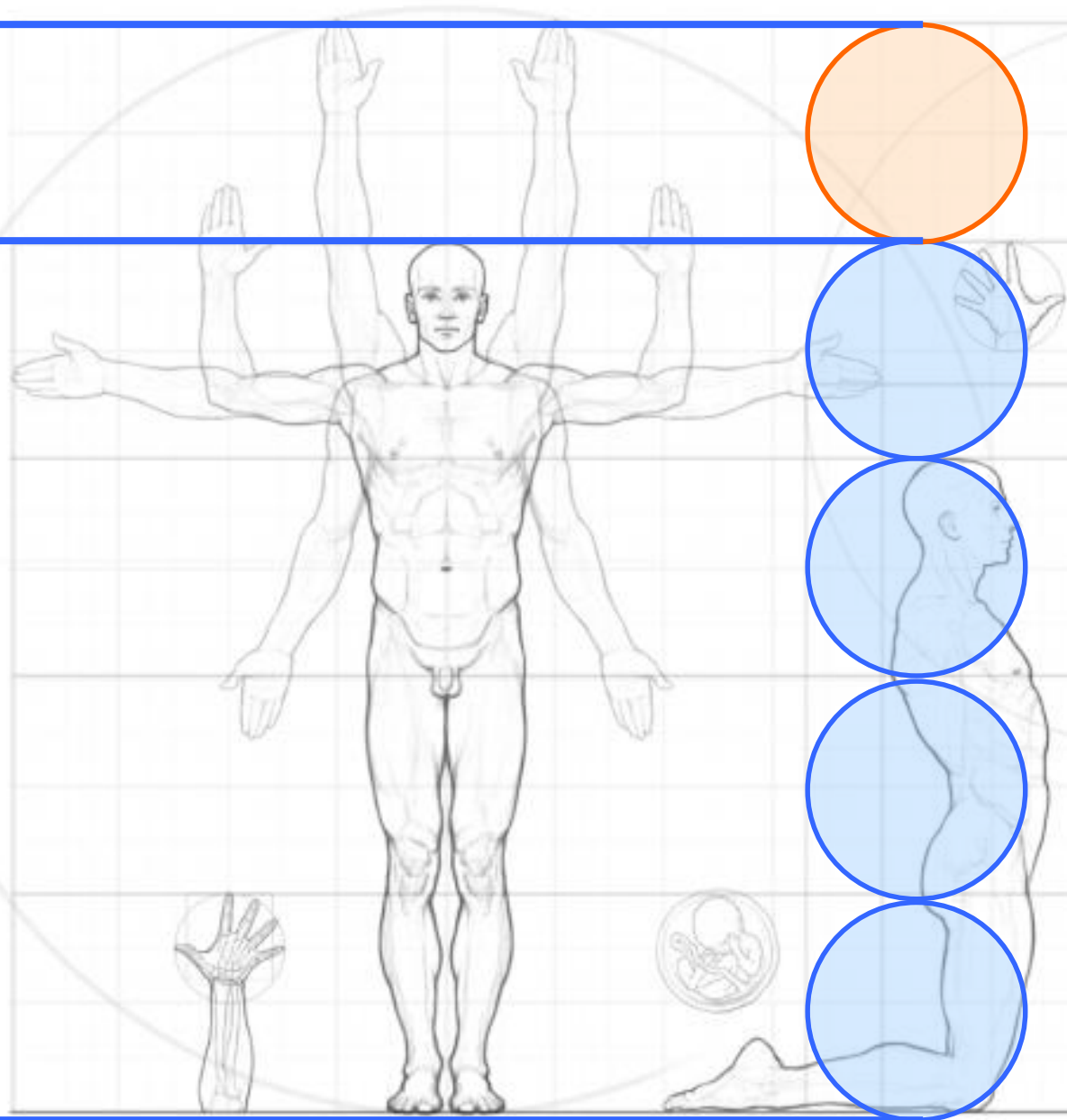
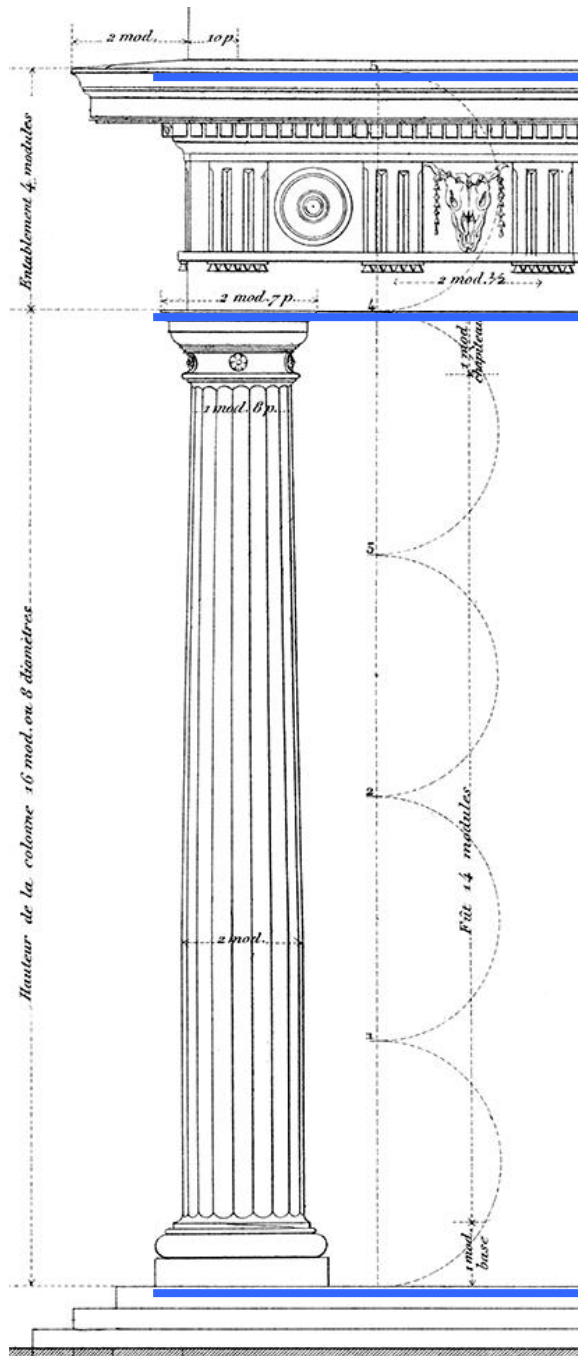








BRICKEY CANON (18 HEADS)











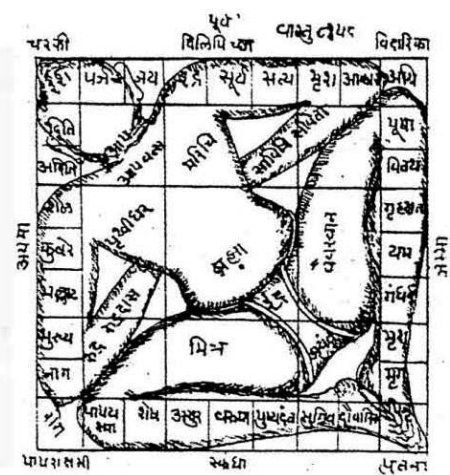
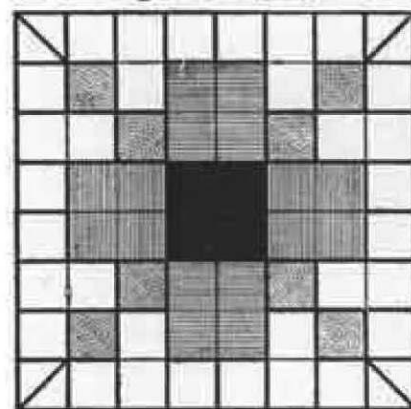
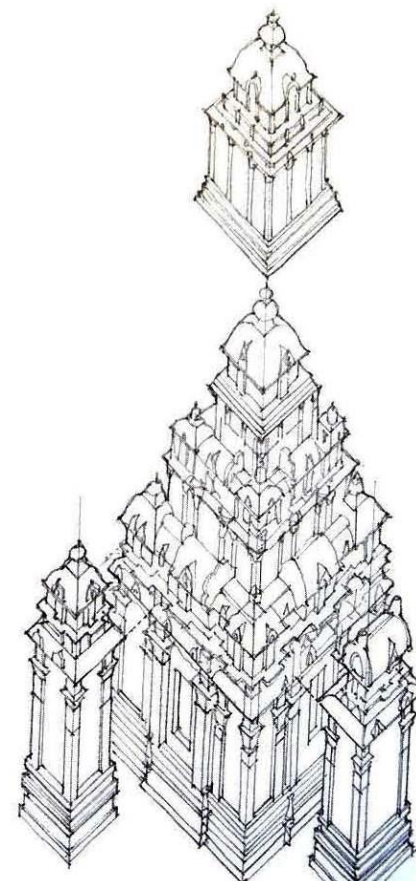
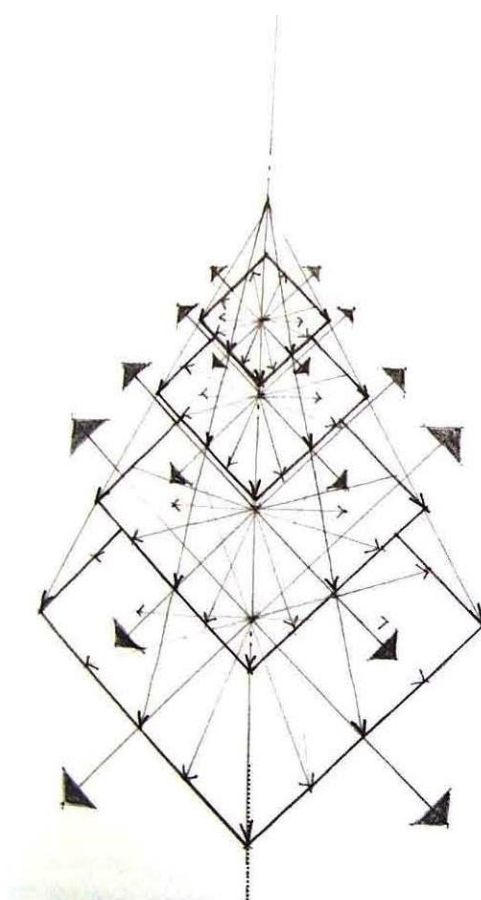




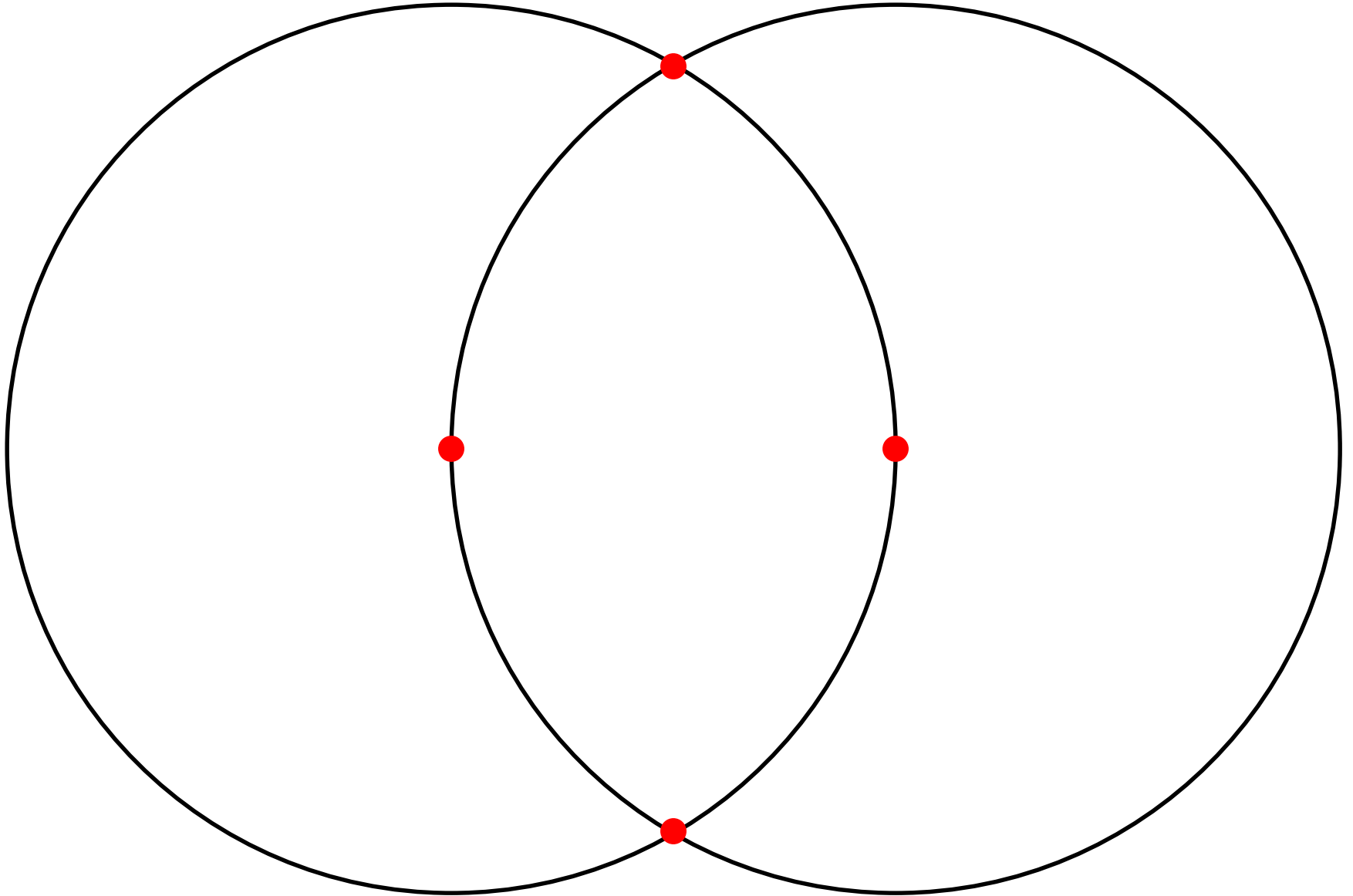




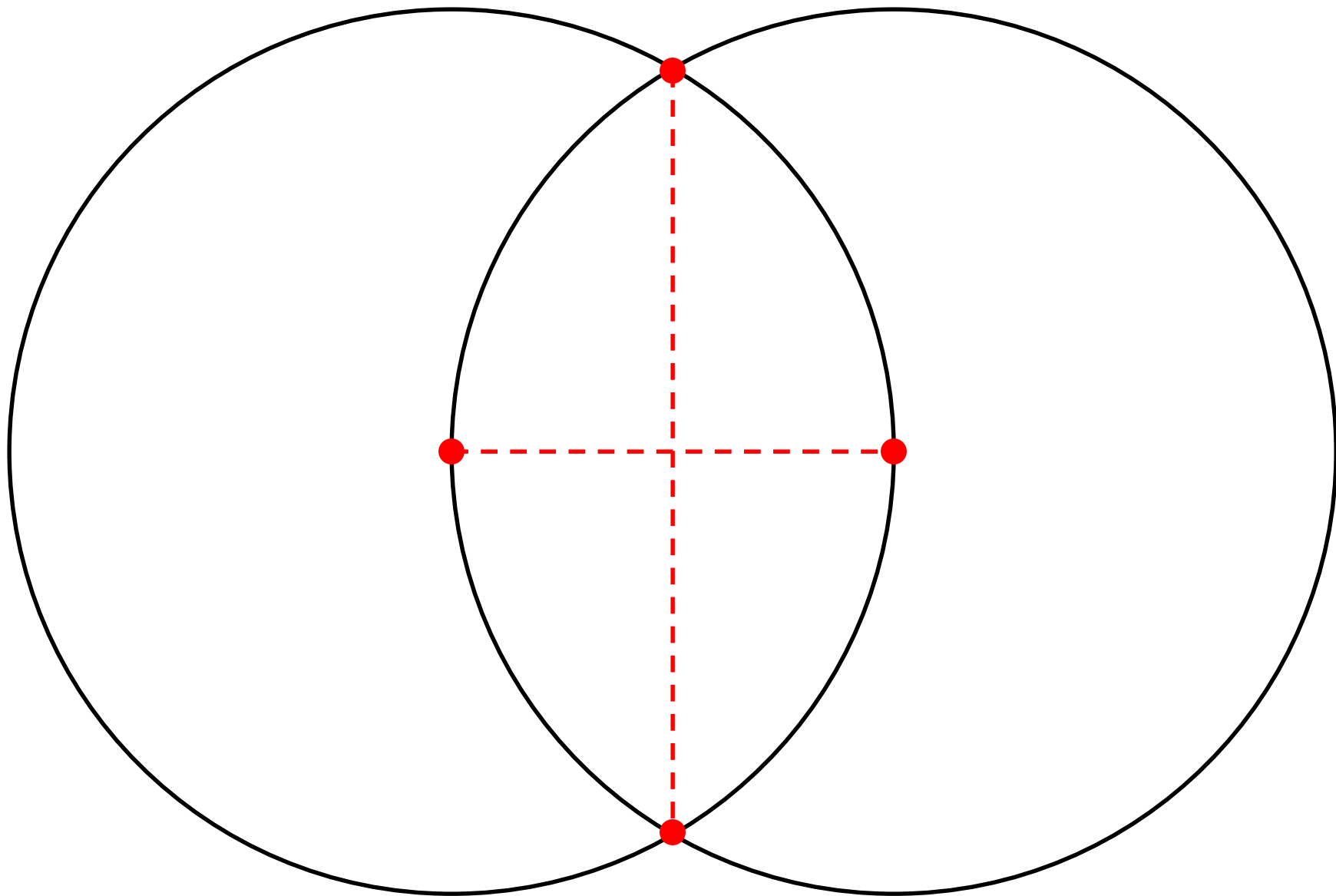


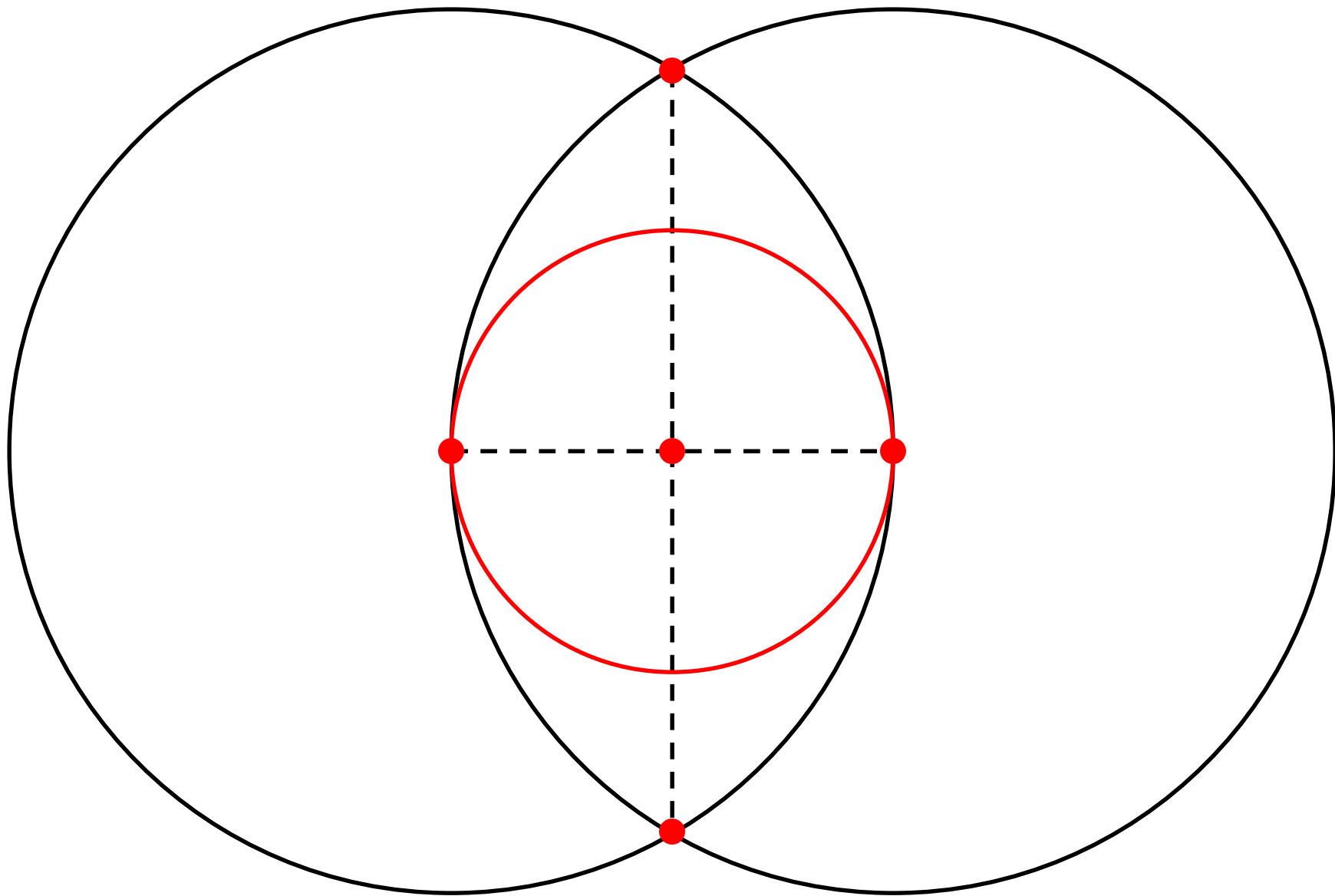


# How to Construct the Square

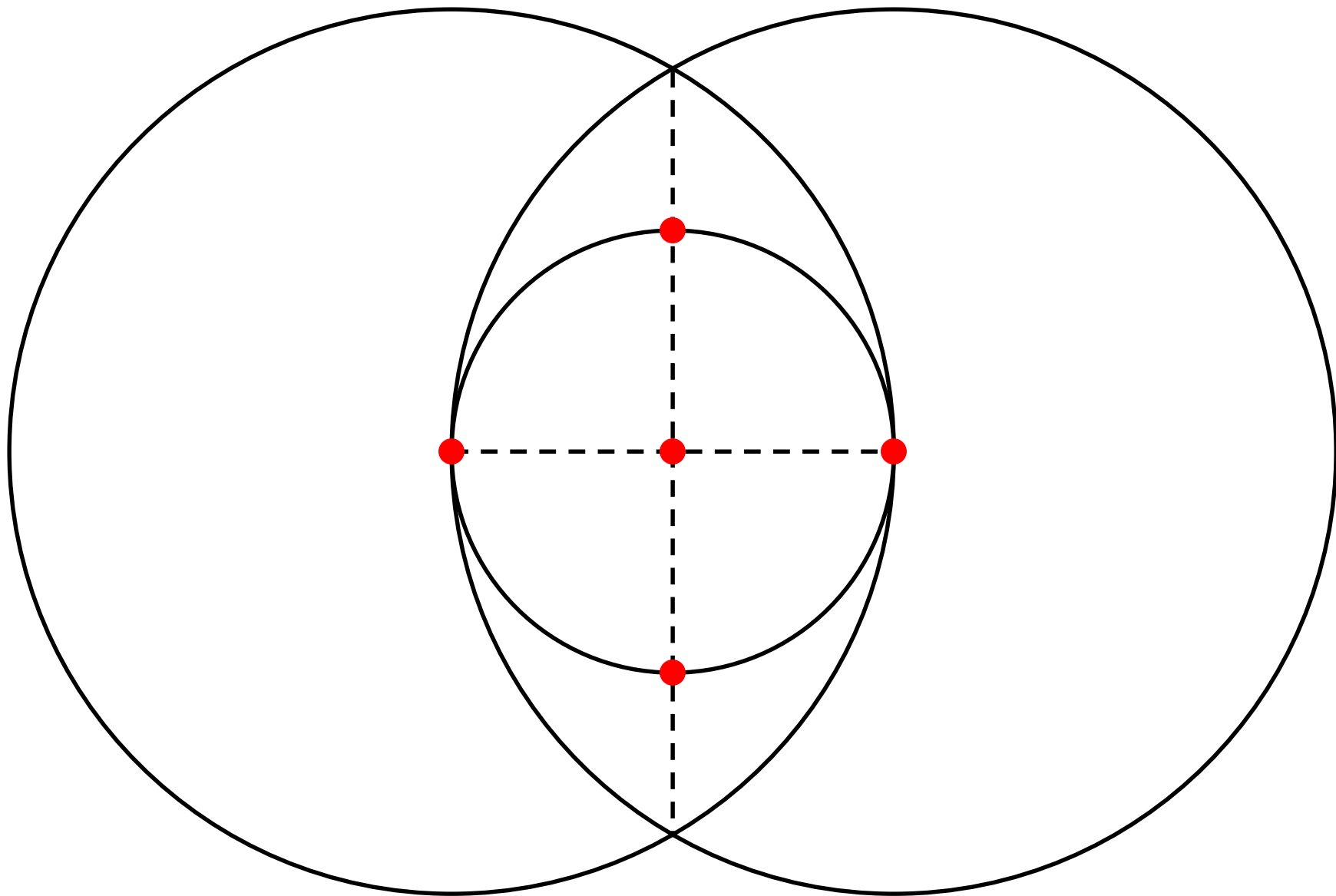


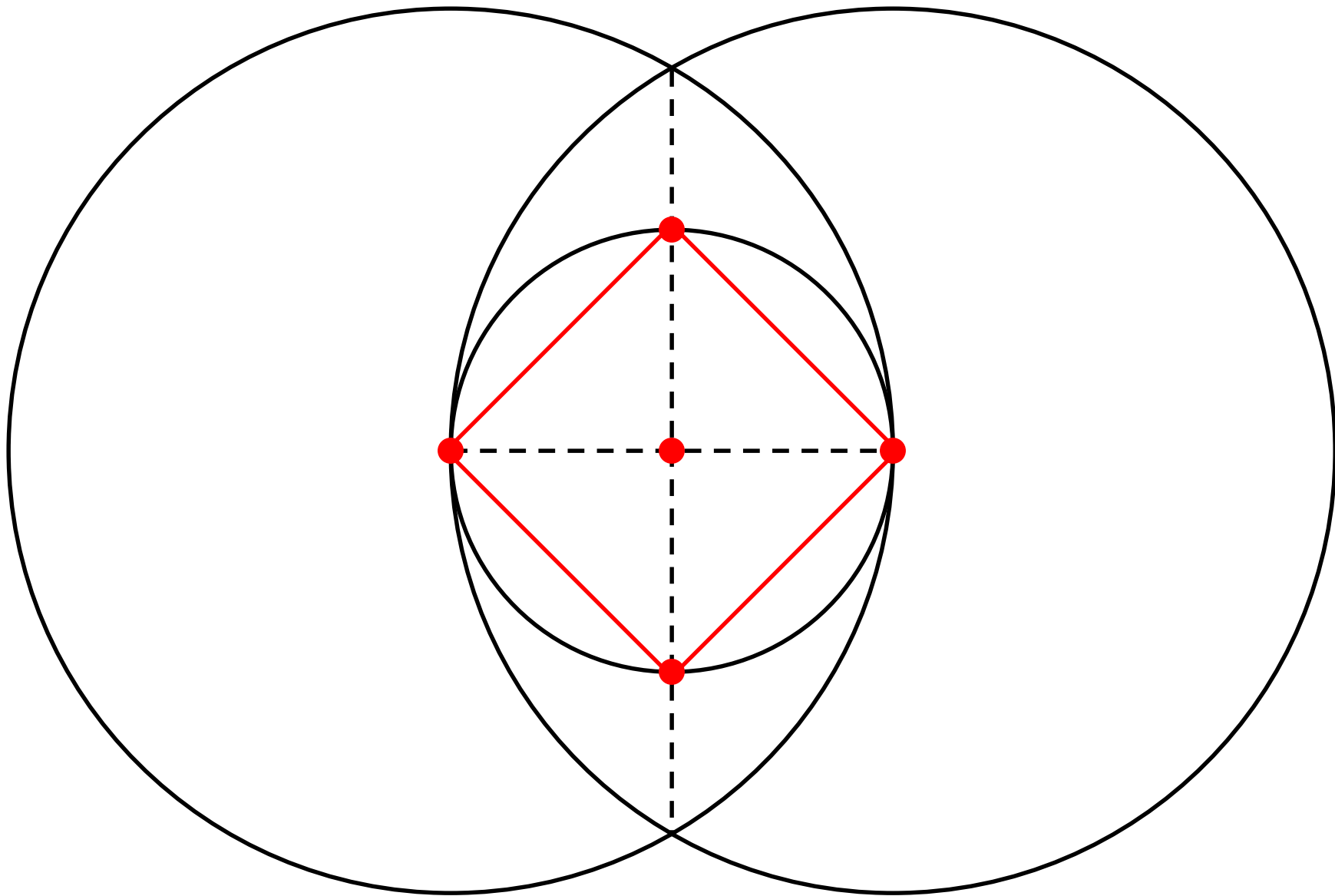












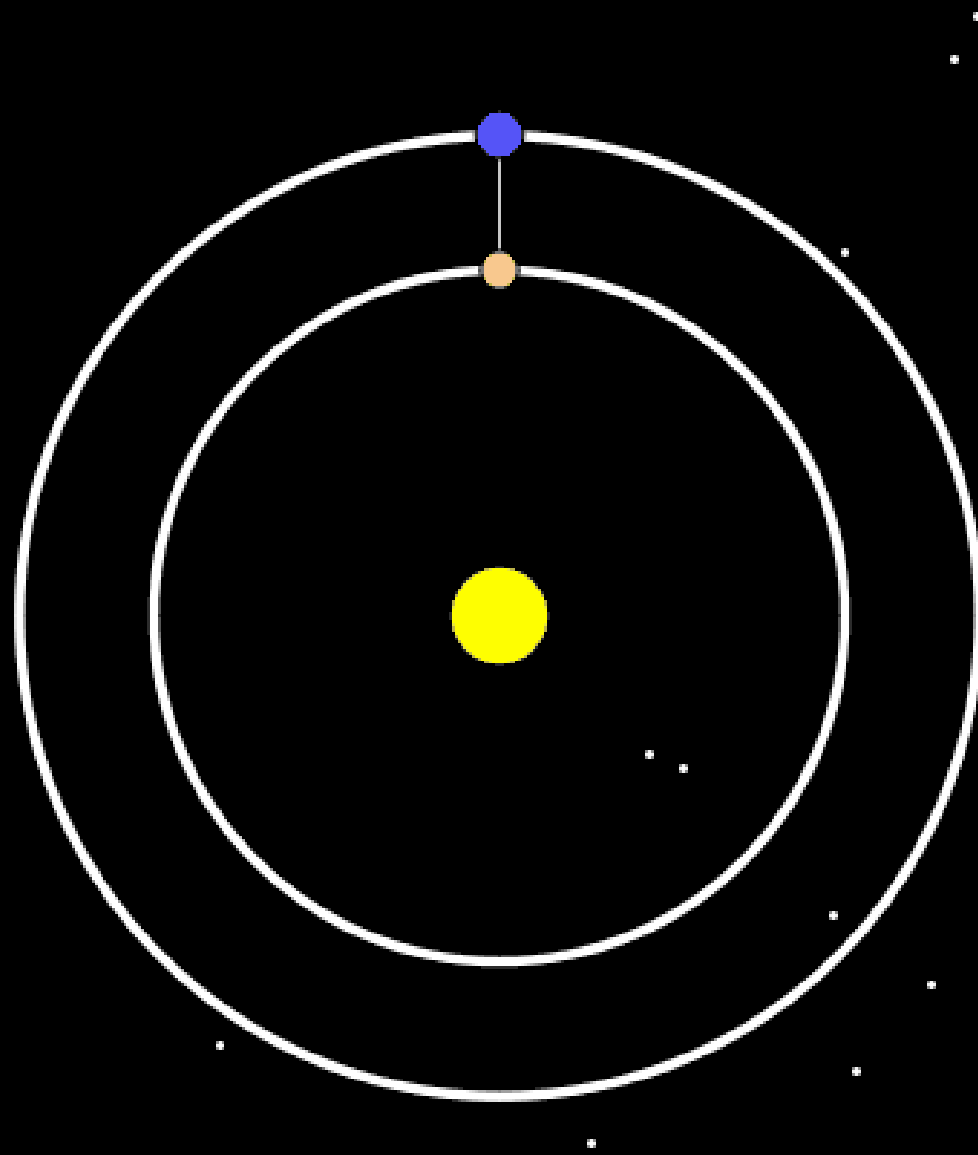


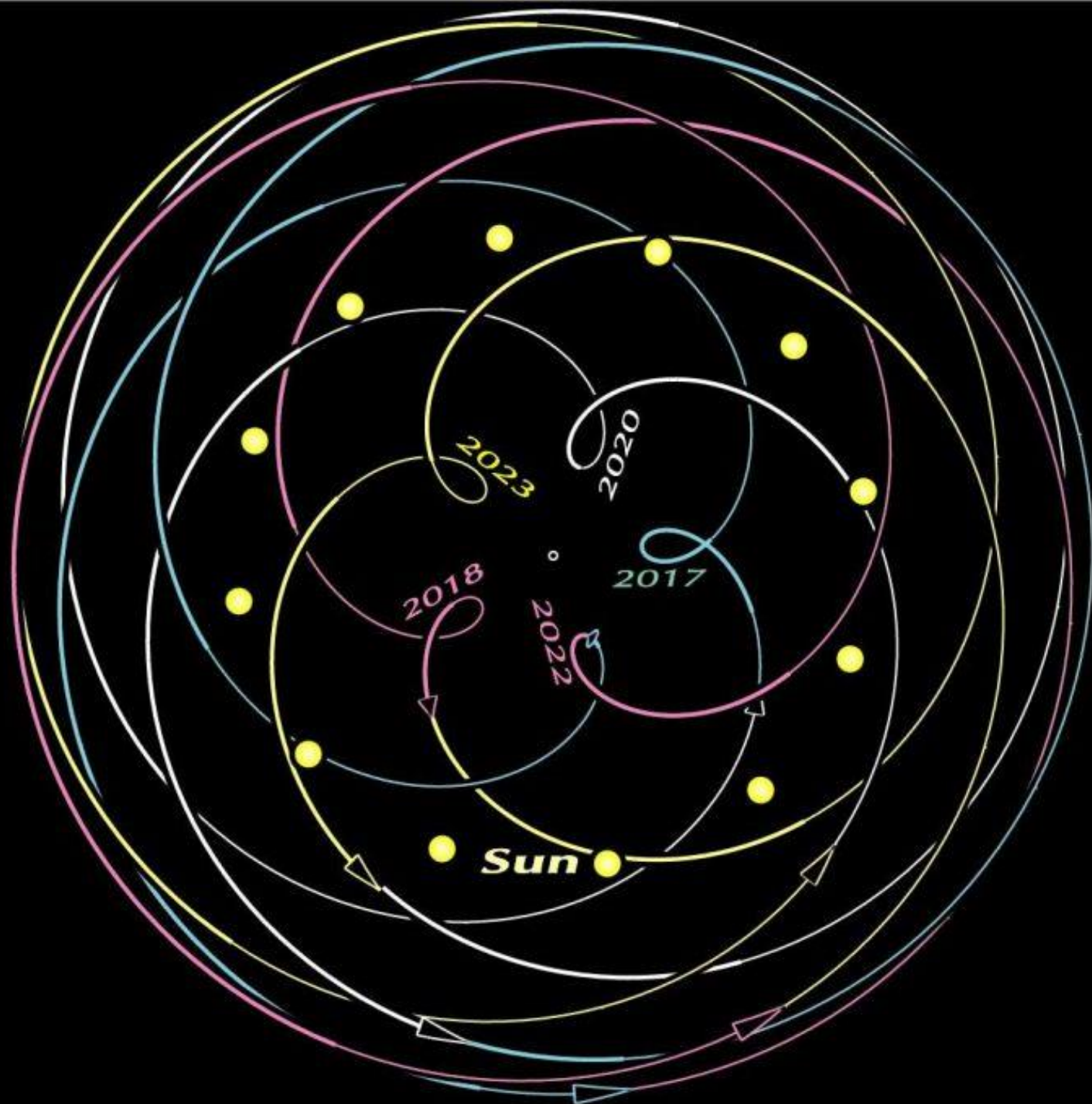
PENTAD

“5”

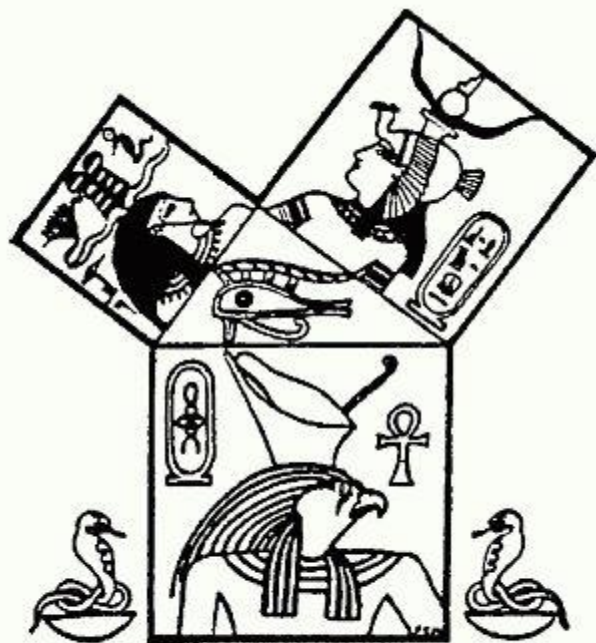




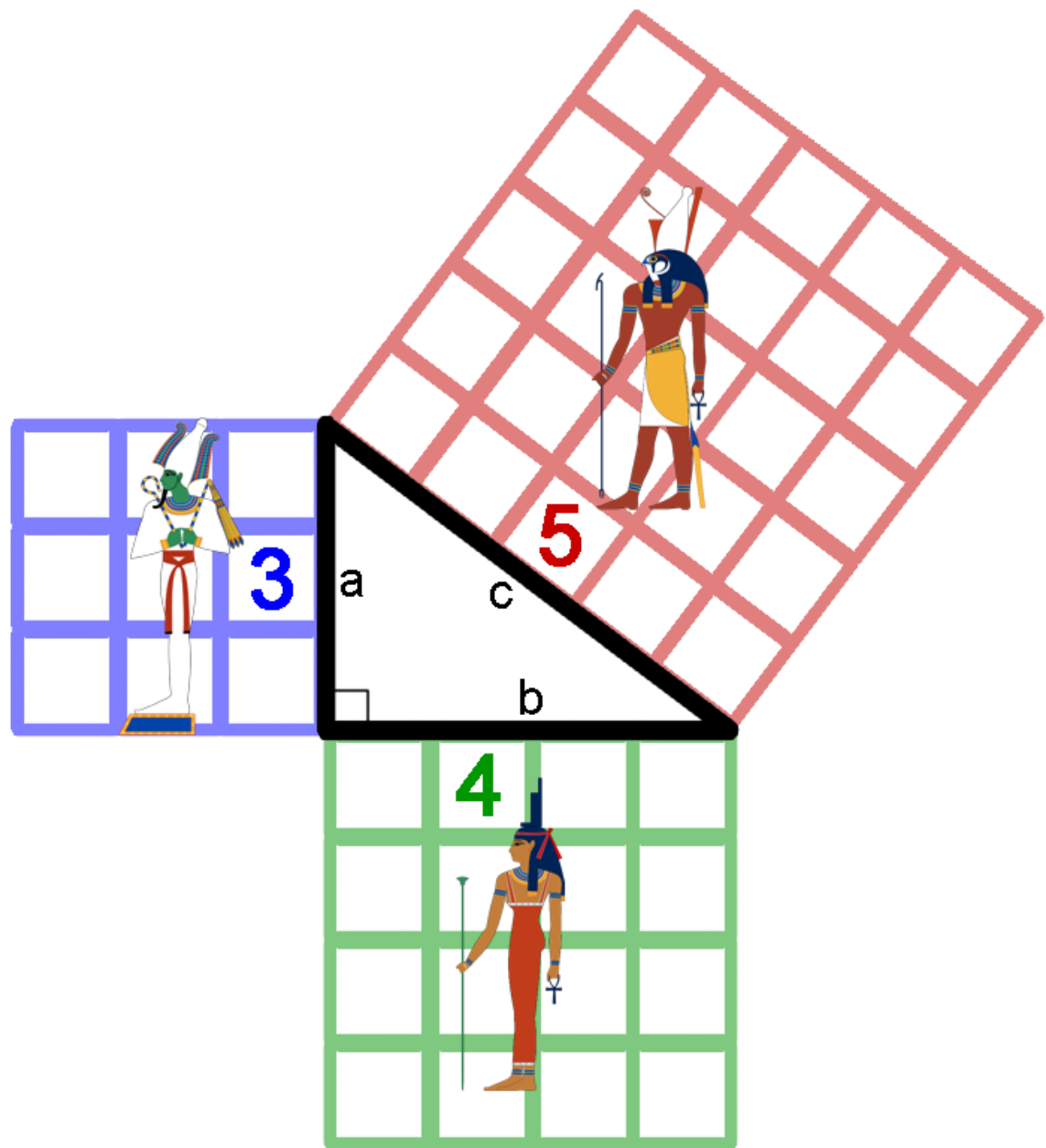




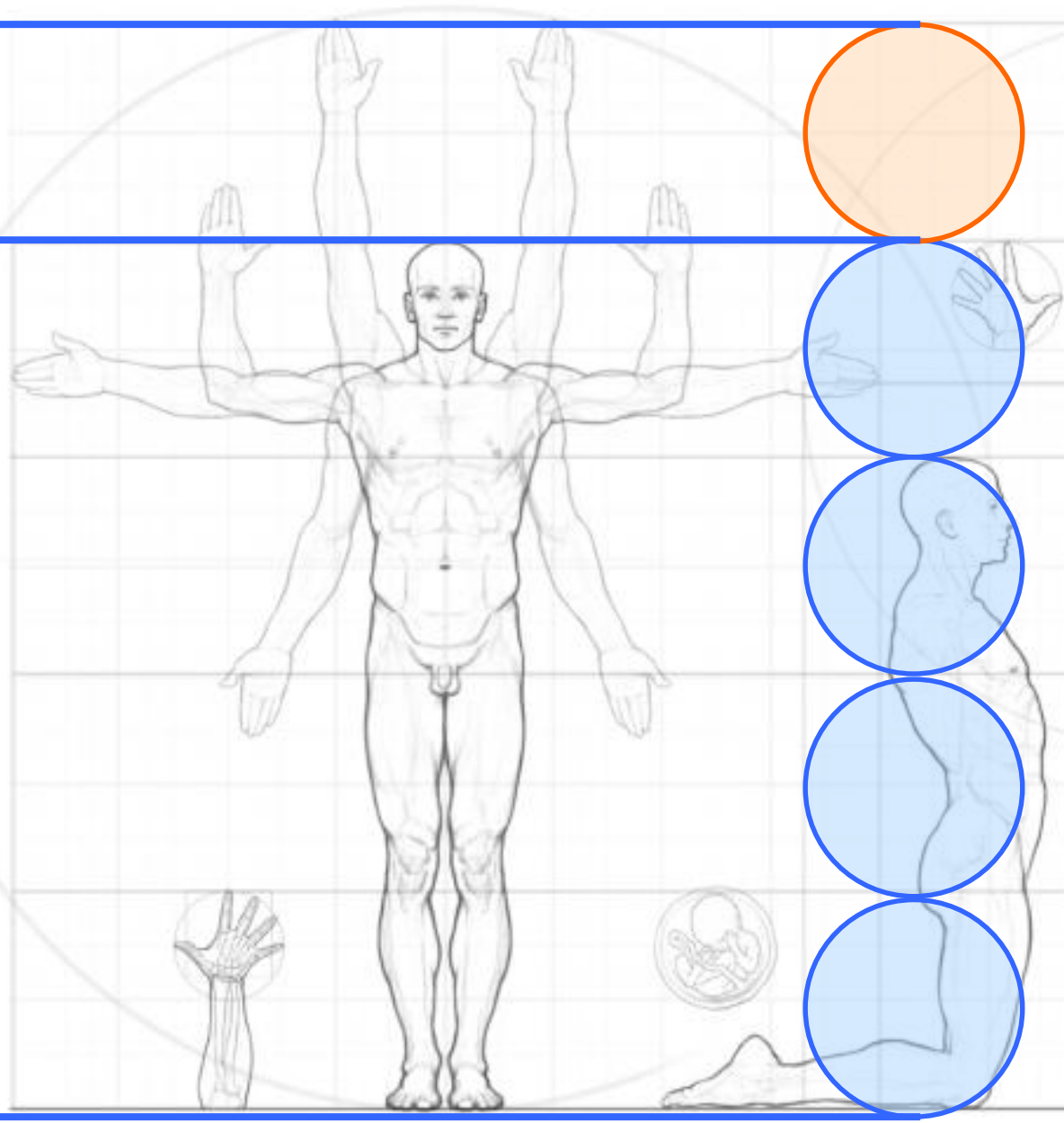
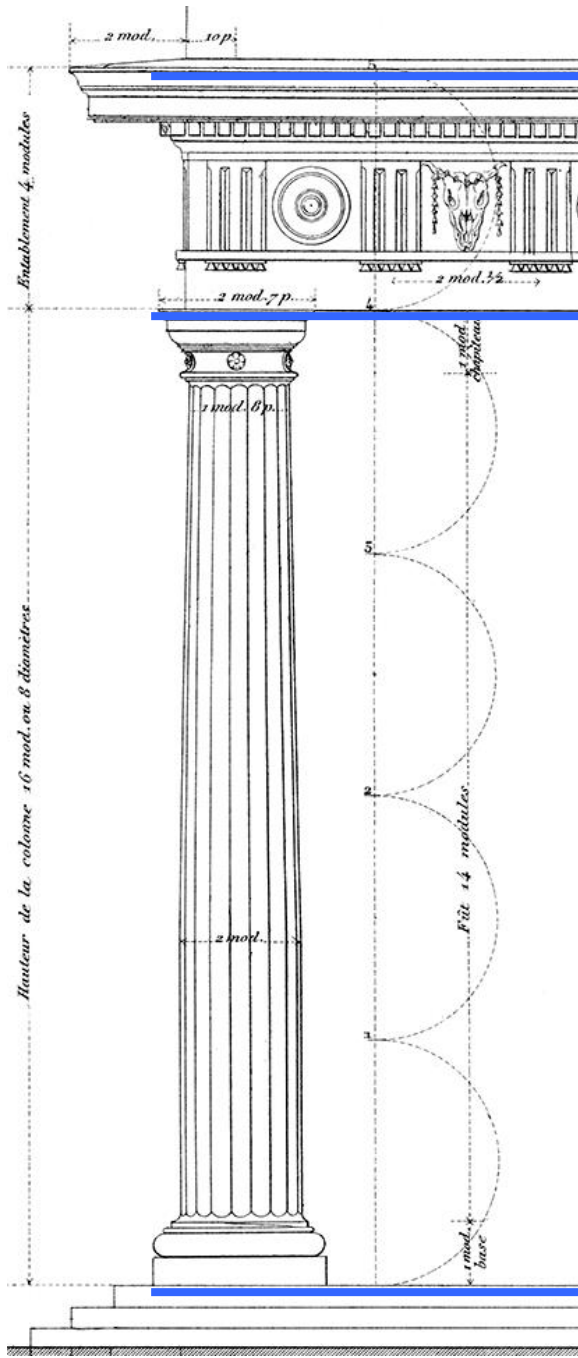




The "Forty-seventh Problem" was among the Ancient Egyptians the symbol of Osiris, Isis and Horus.



BRICKEY CANON (8 HEADS)





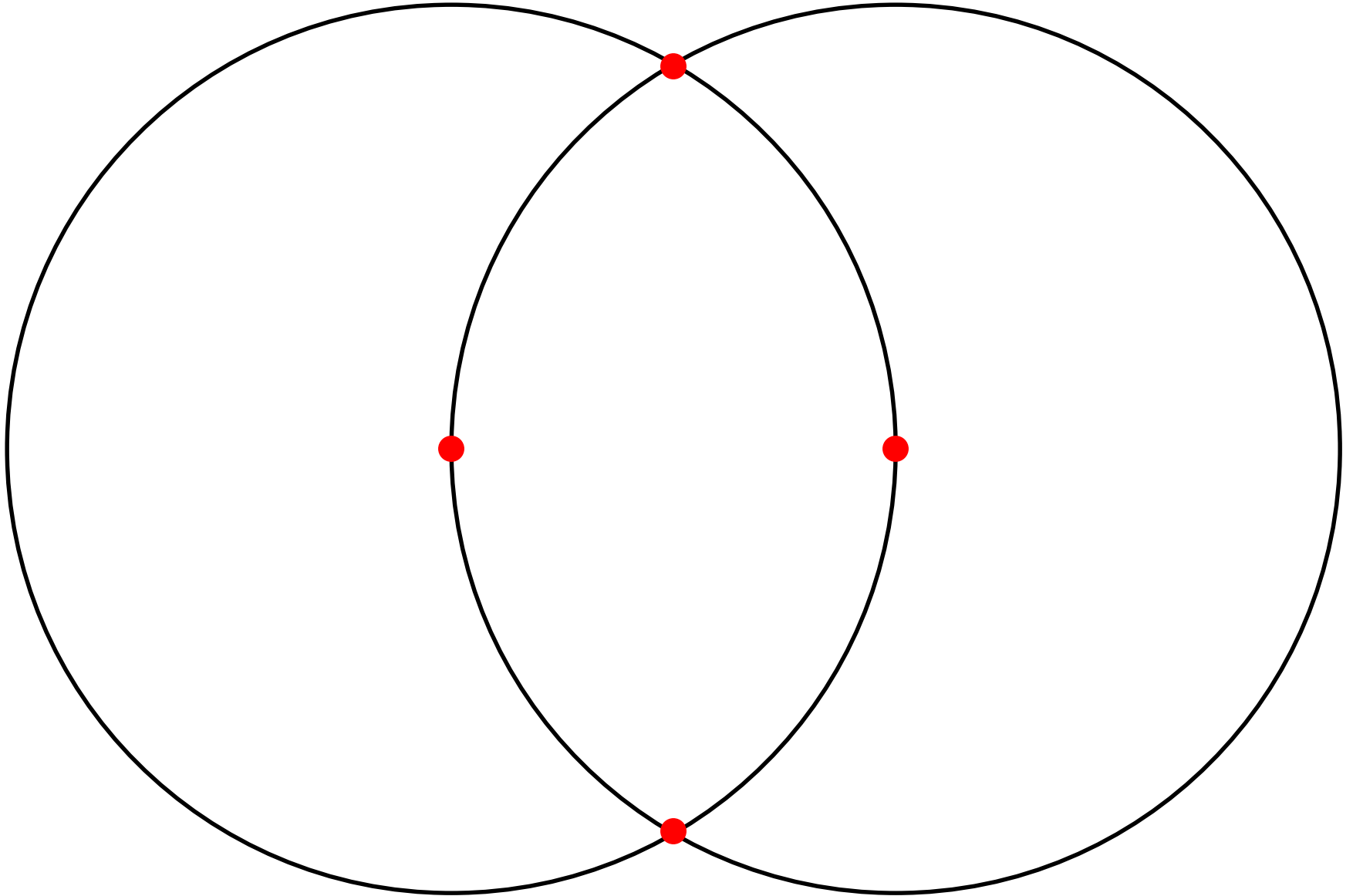


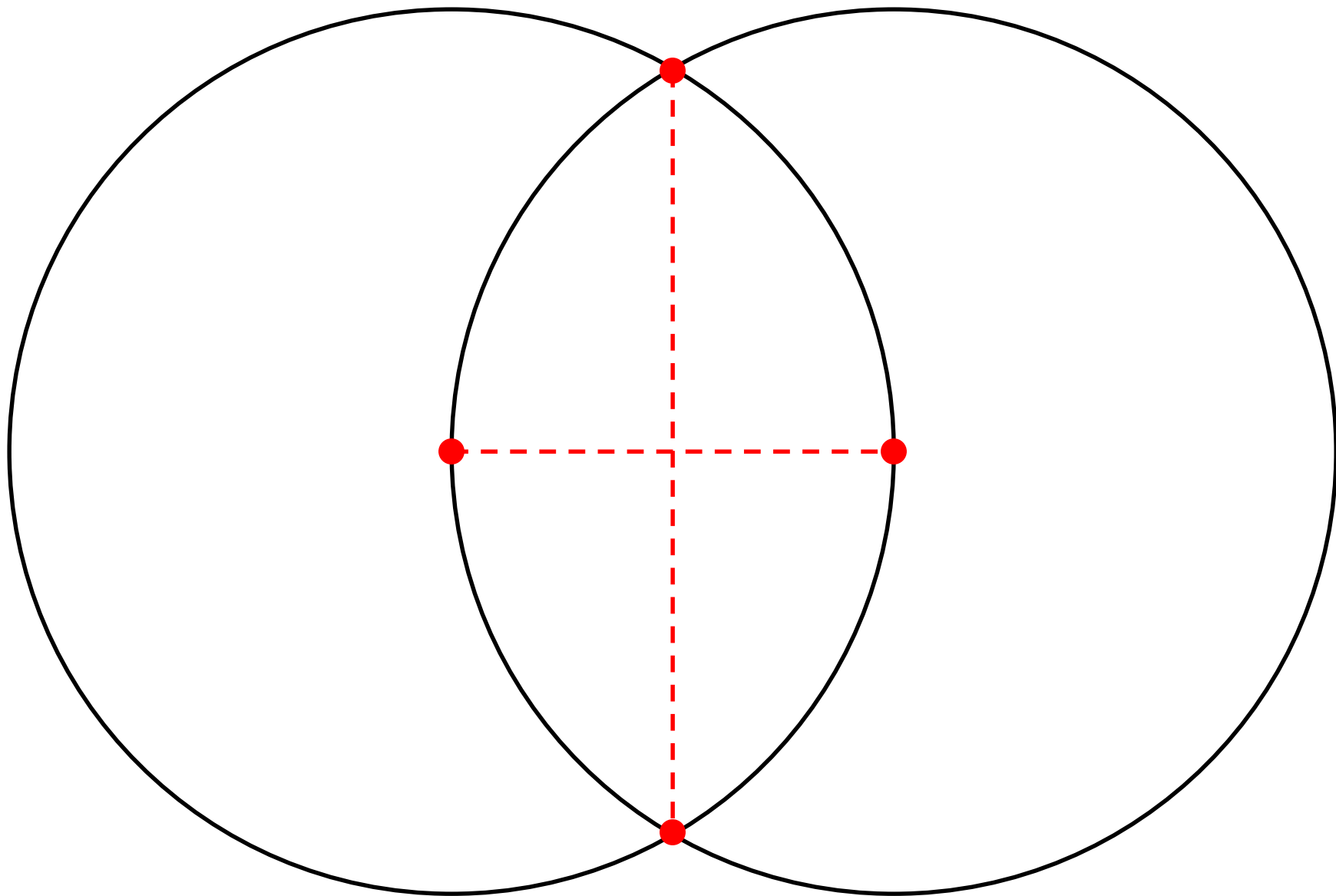




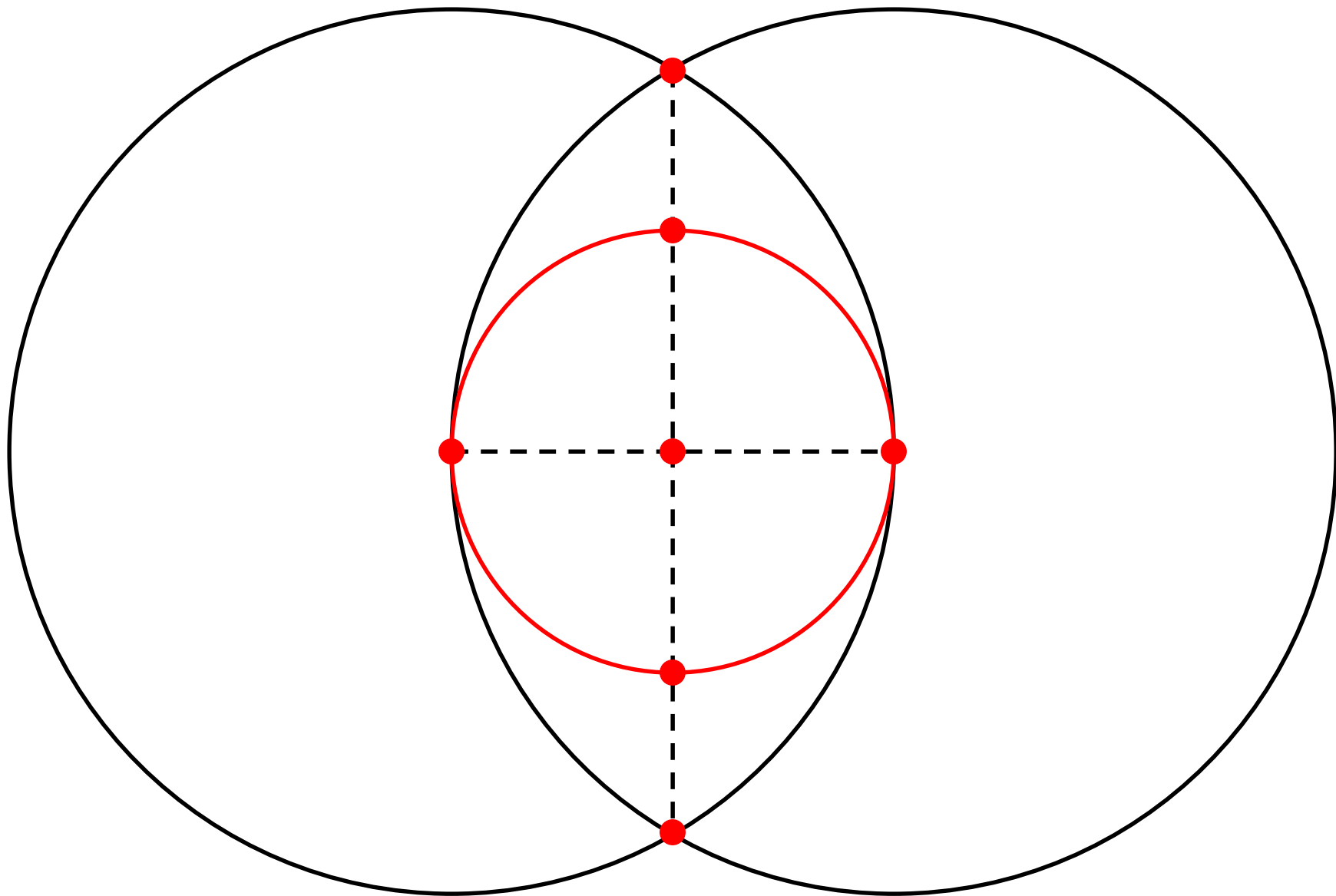


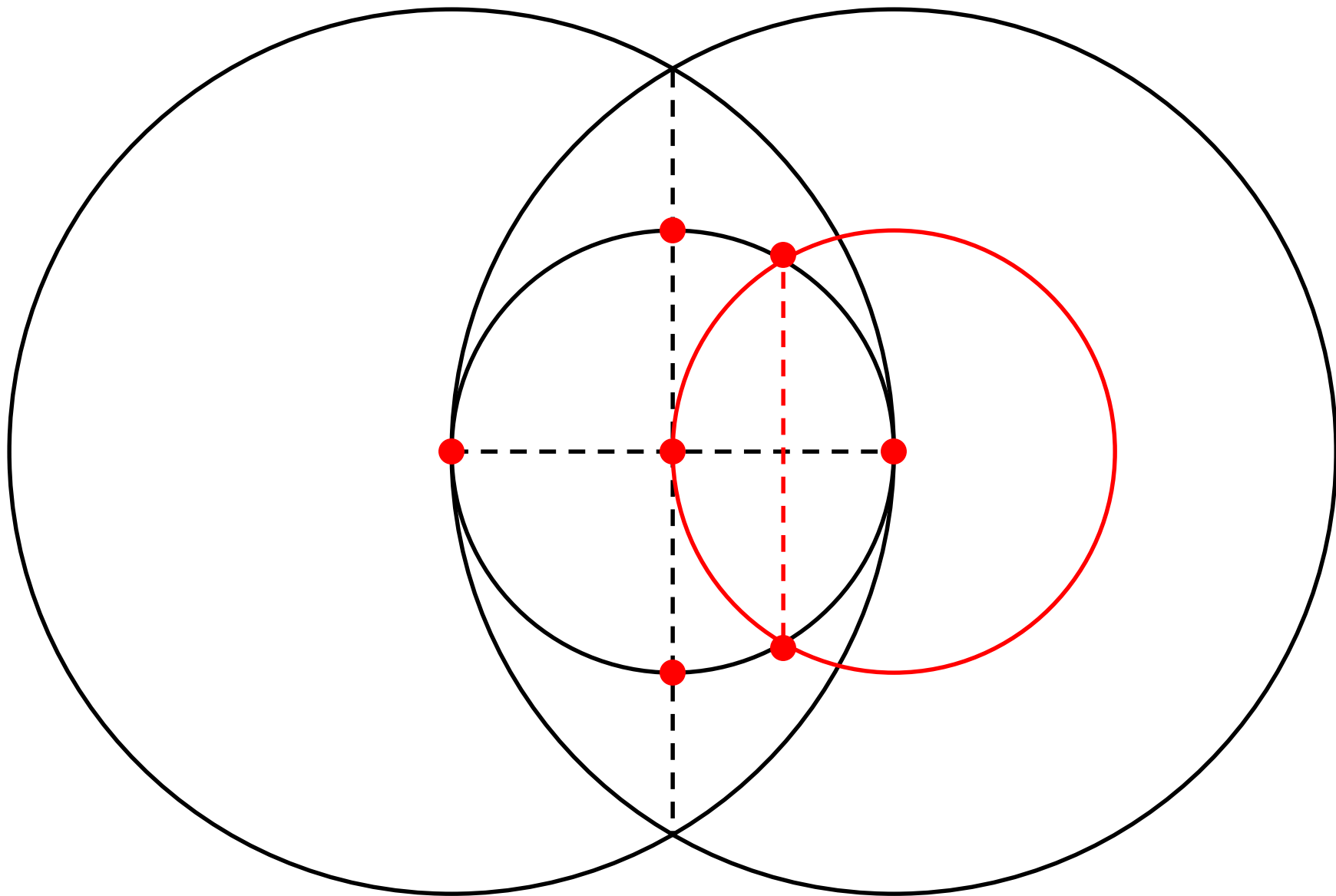
# How to Construct the Pentagon



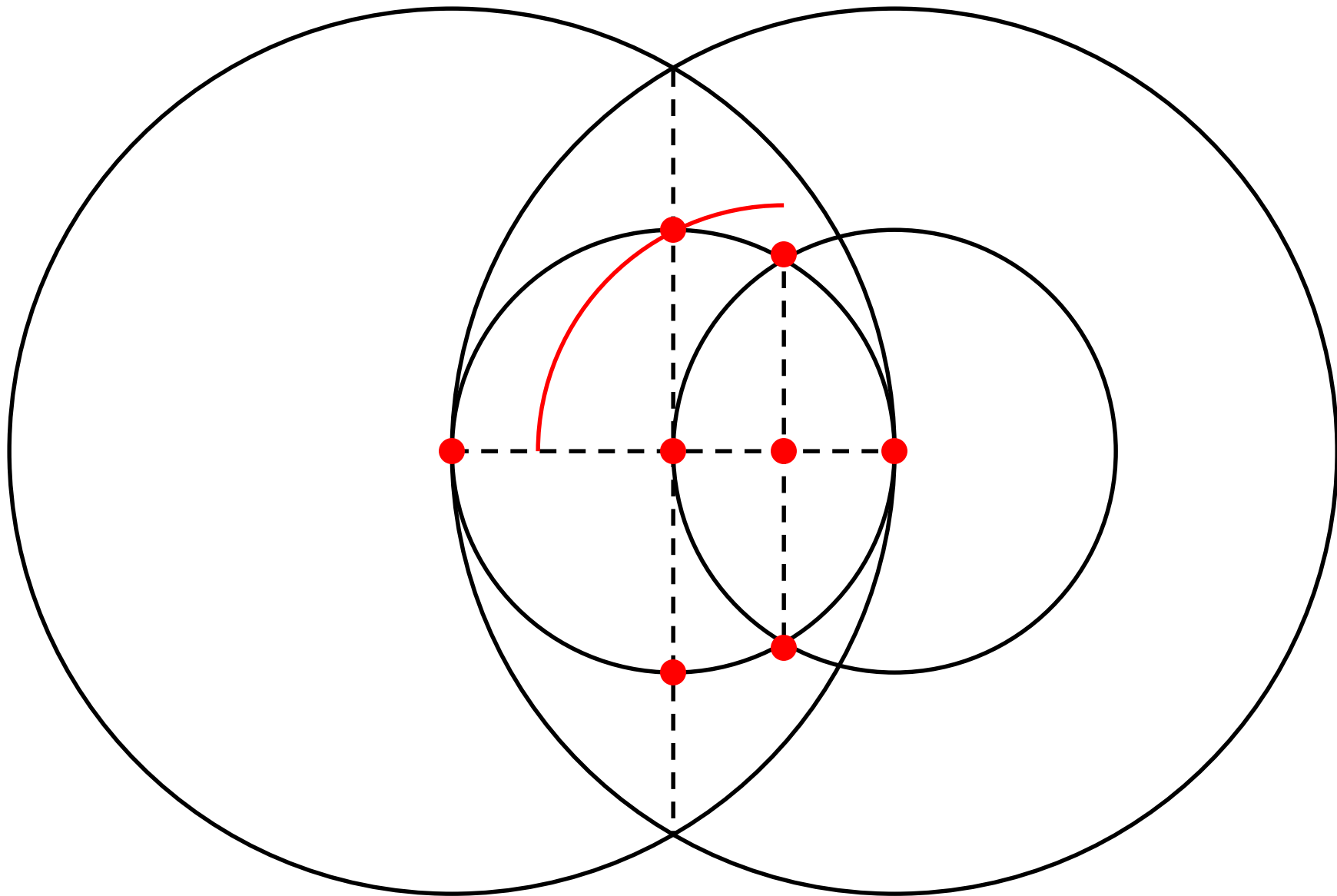


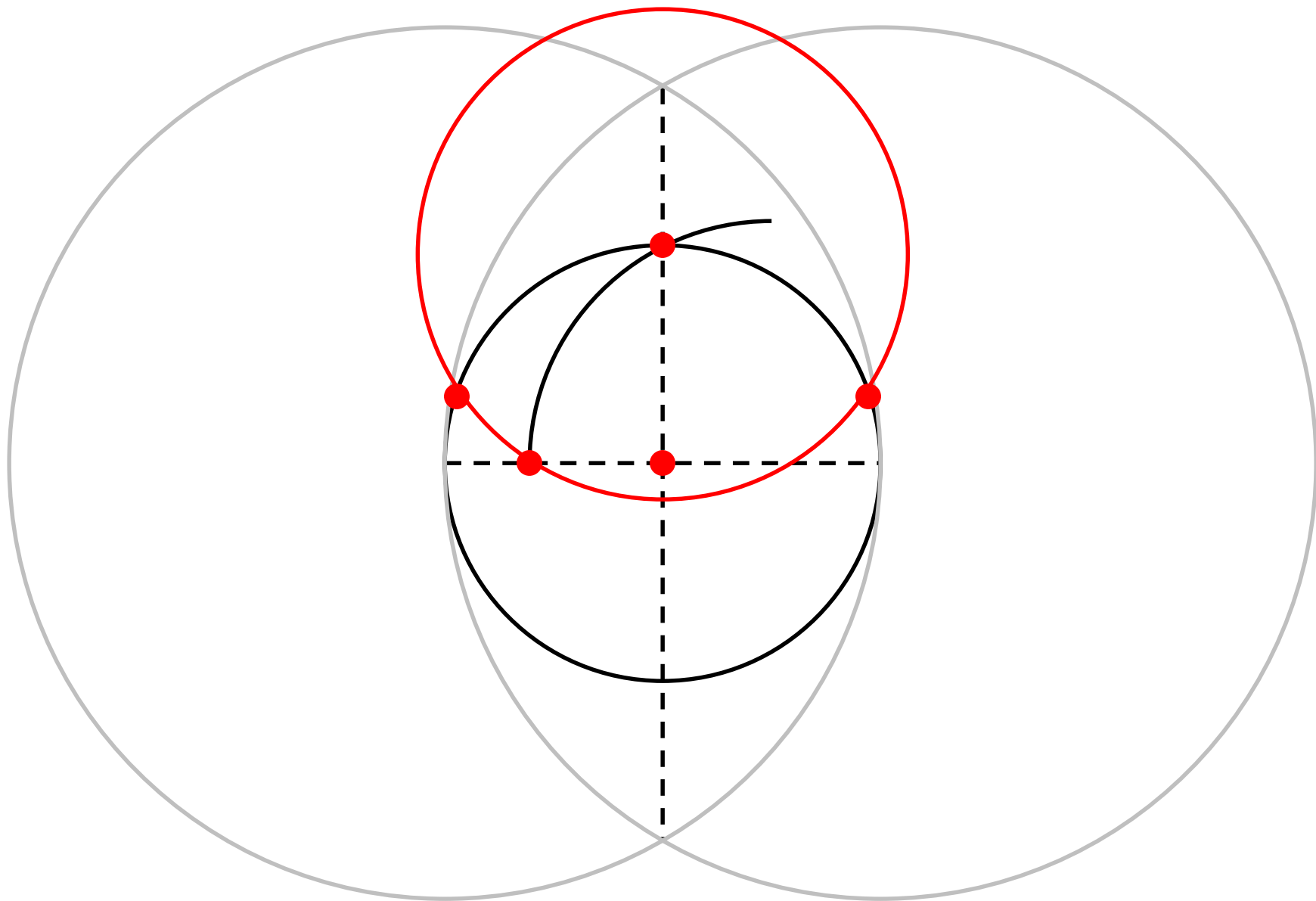




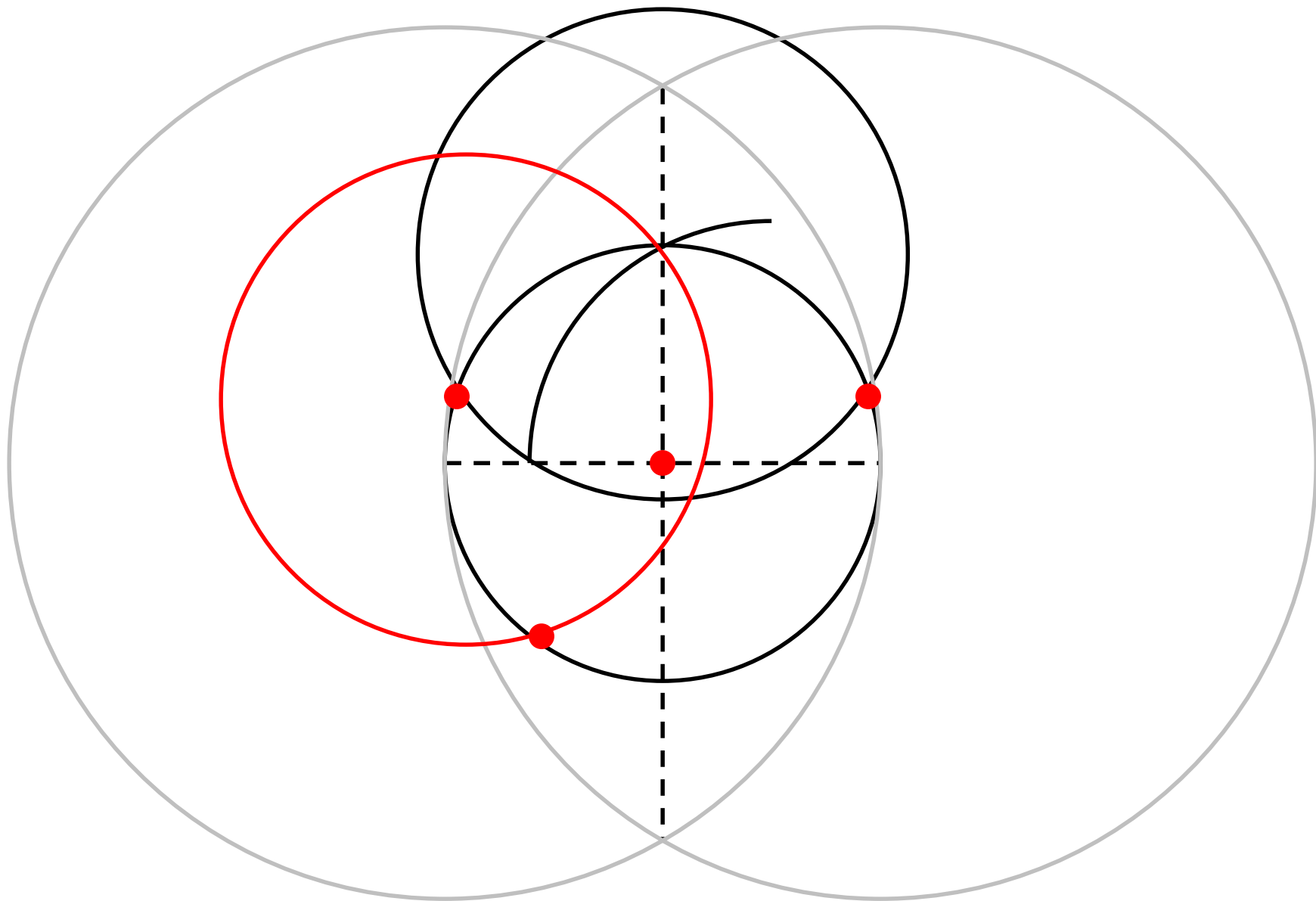


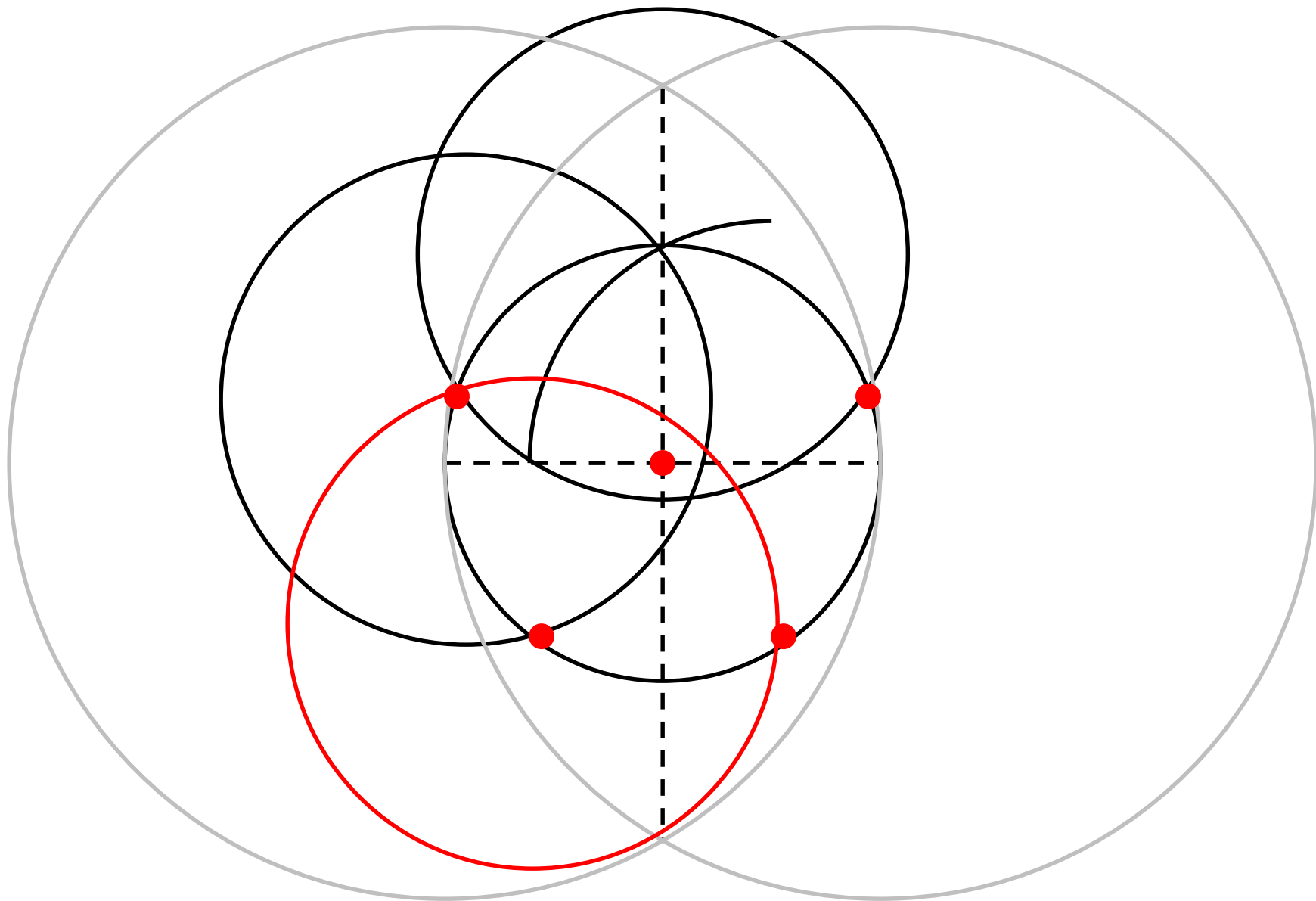




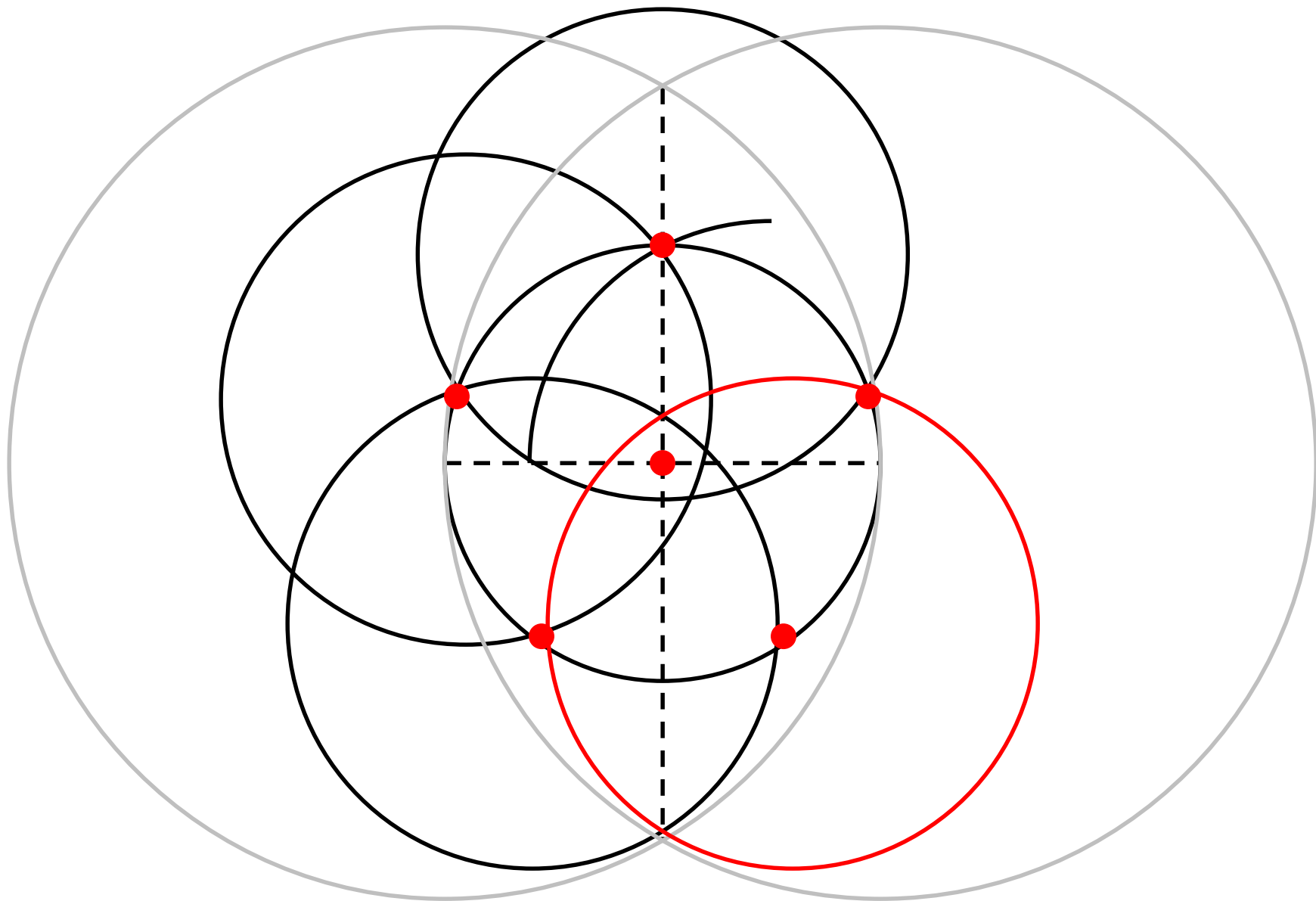


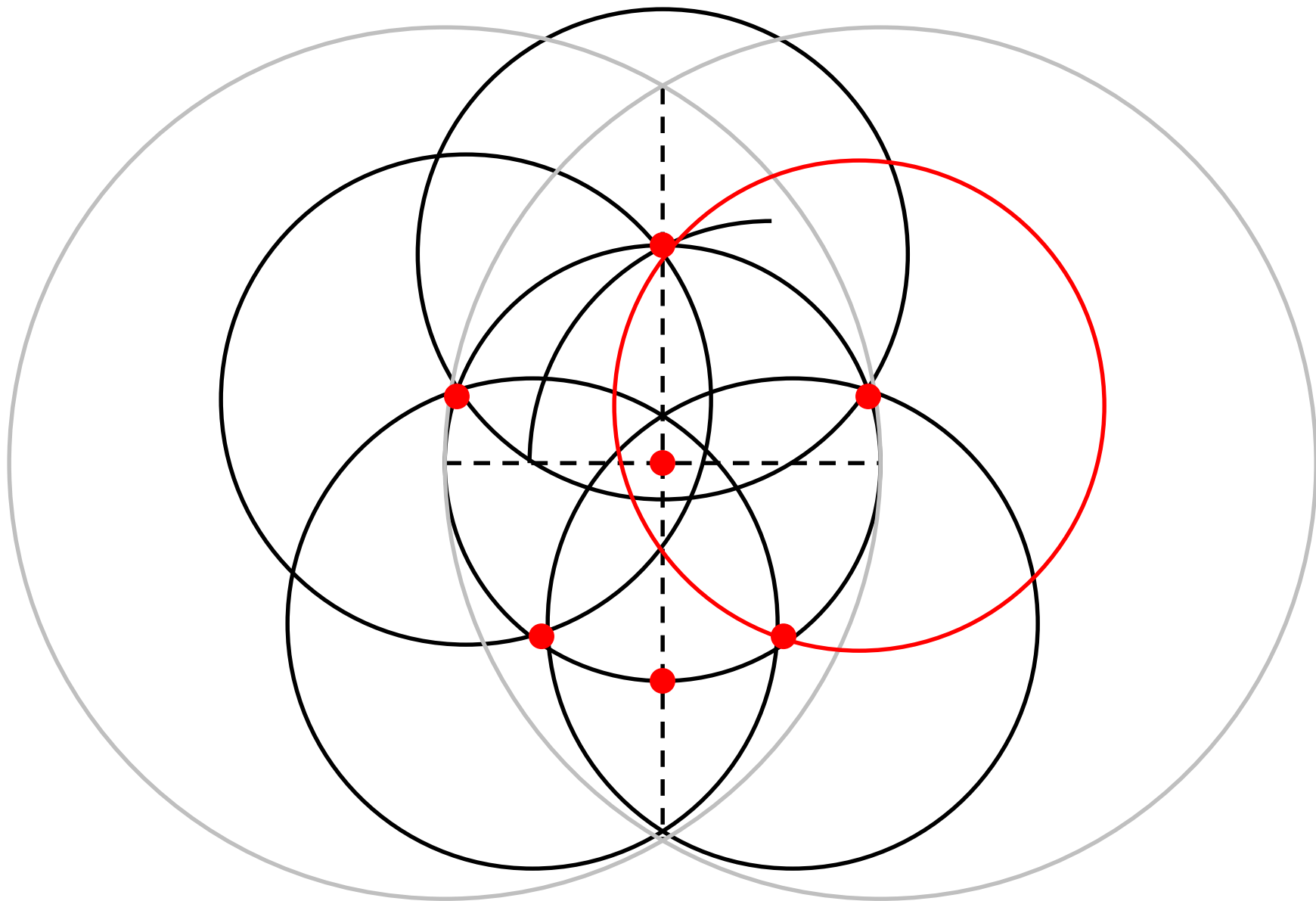




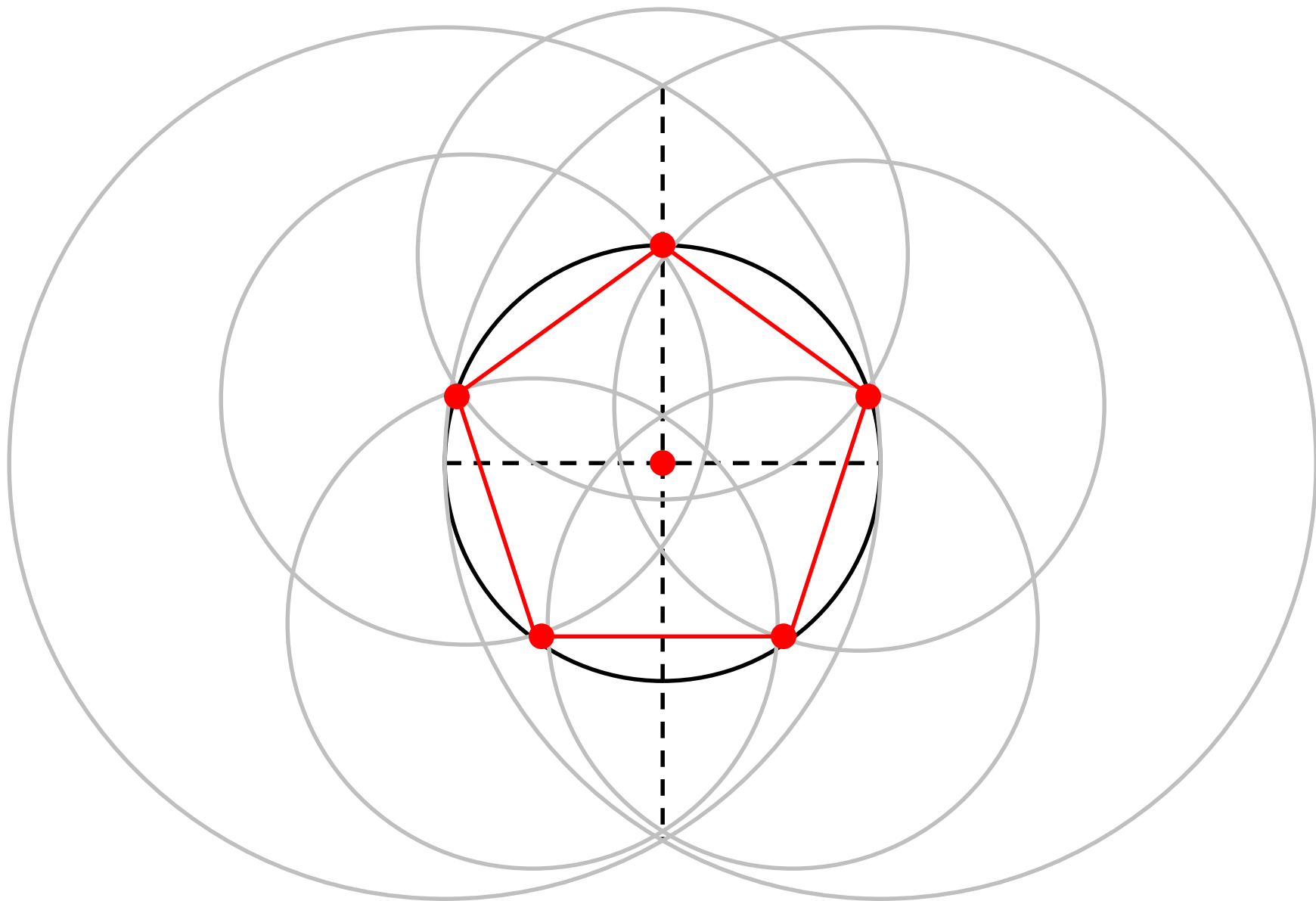












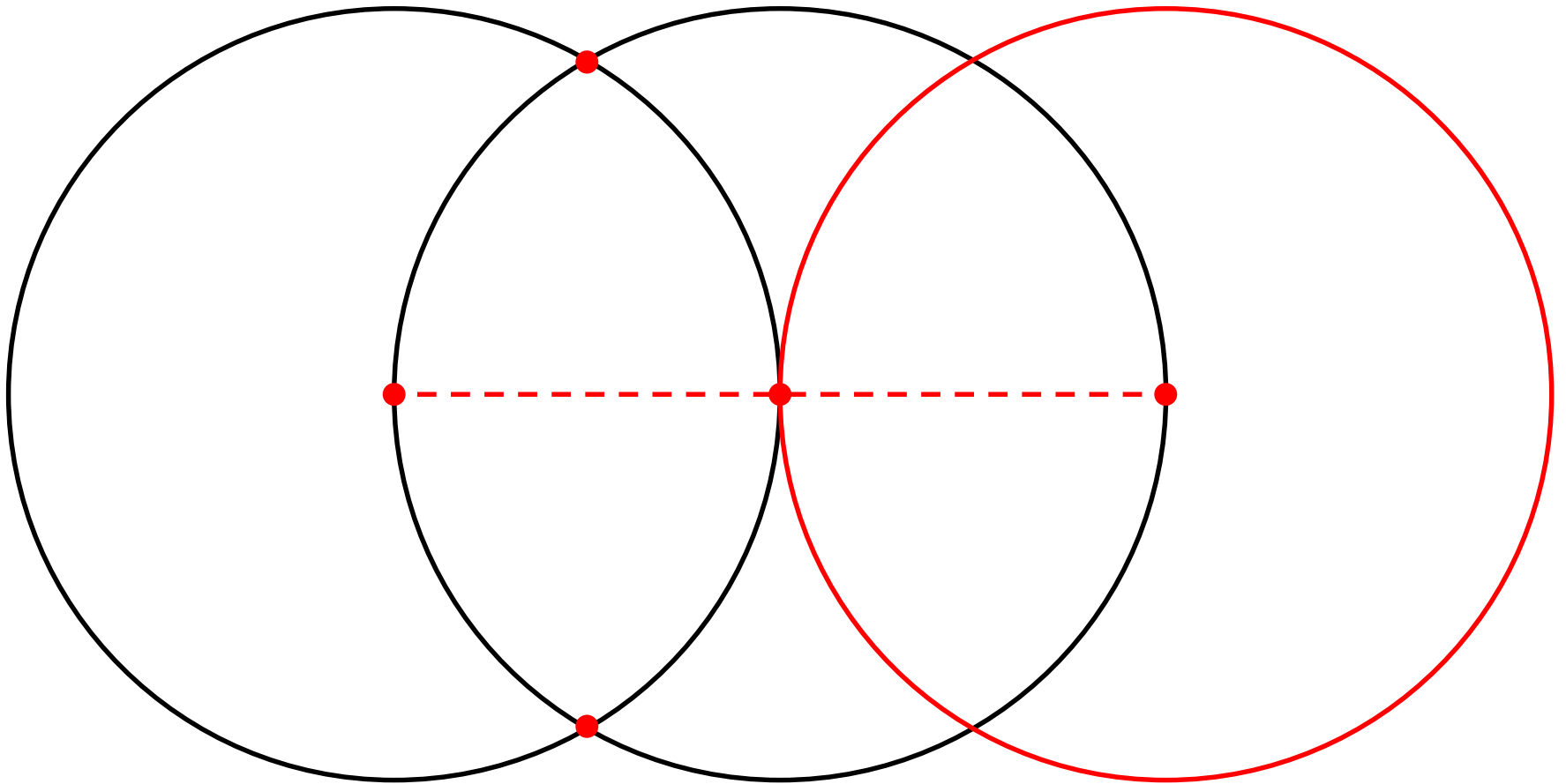
HEXAD

“6”

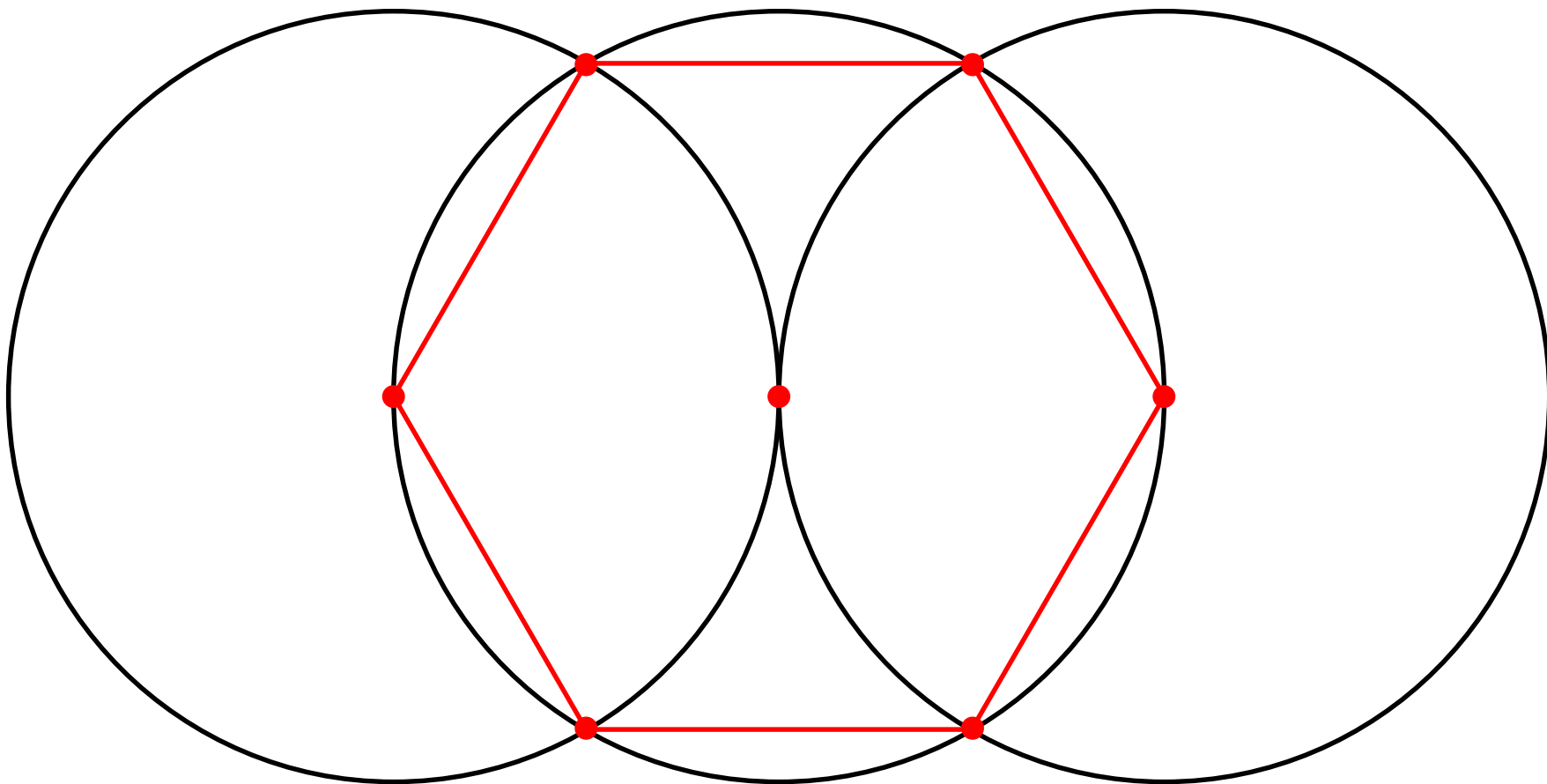


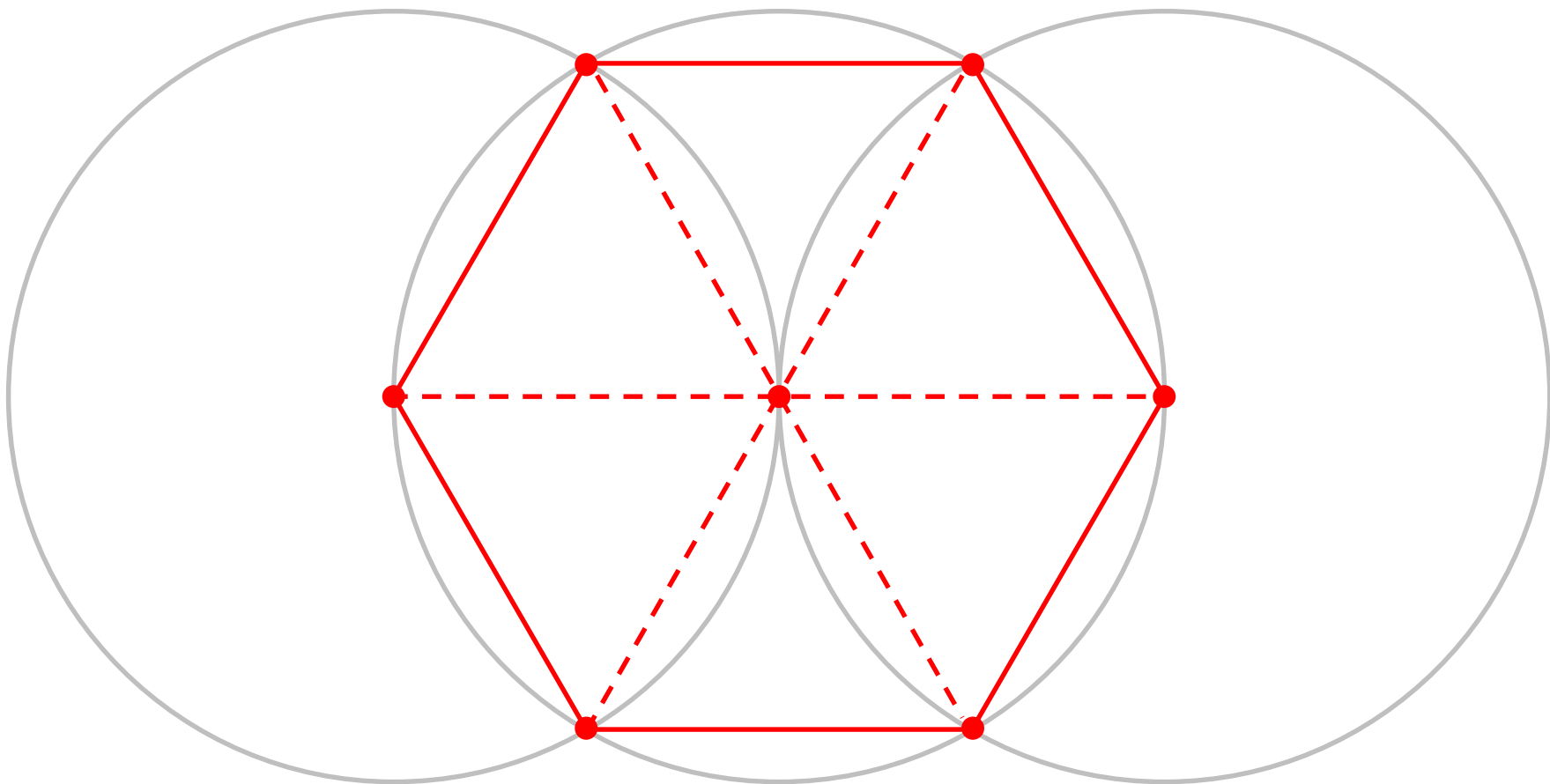


# How to Construct the Hexagon





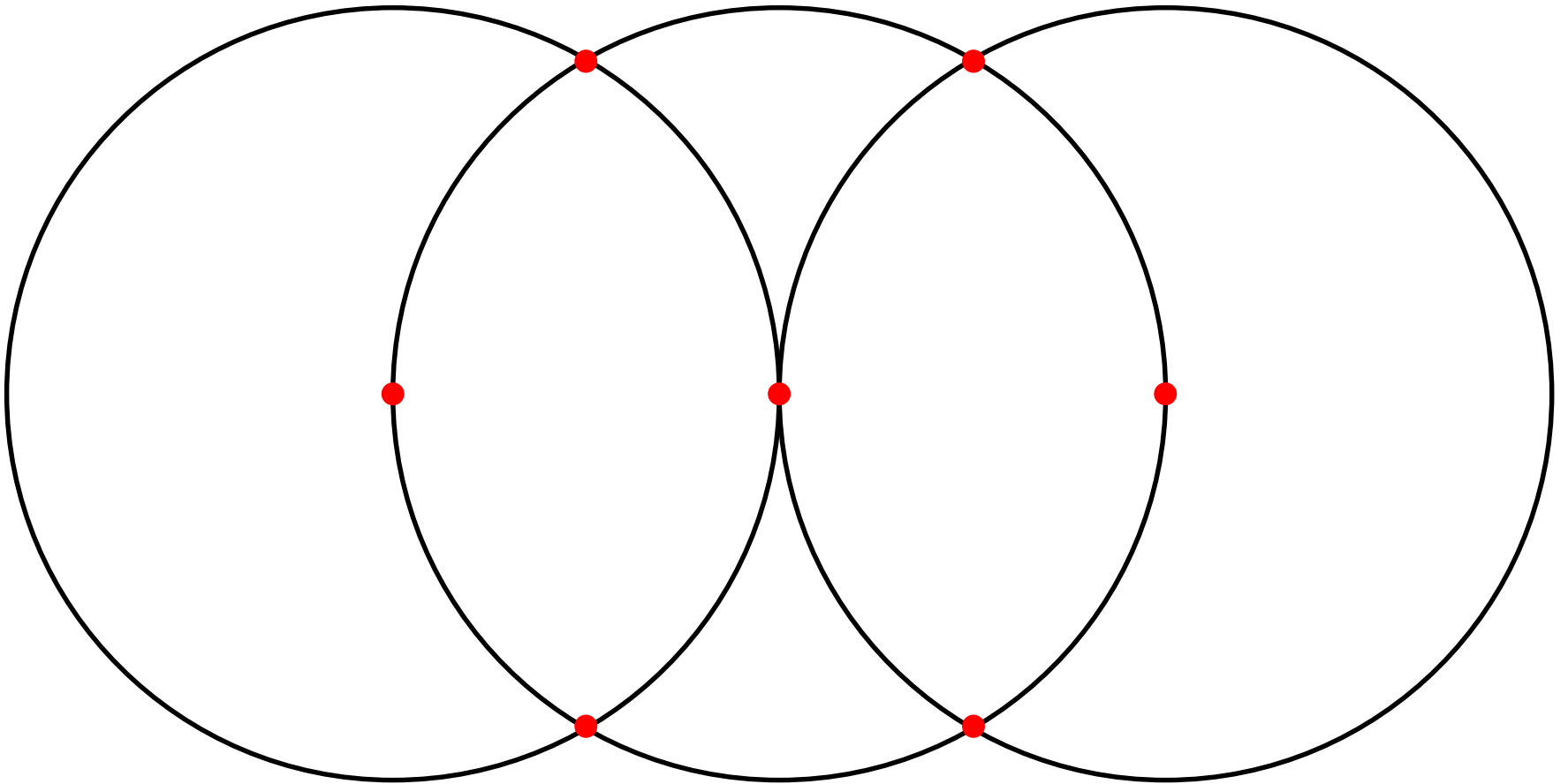




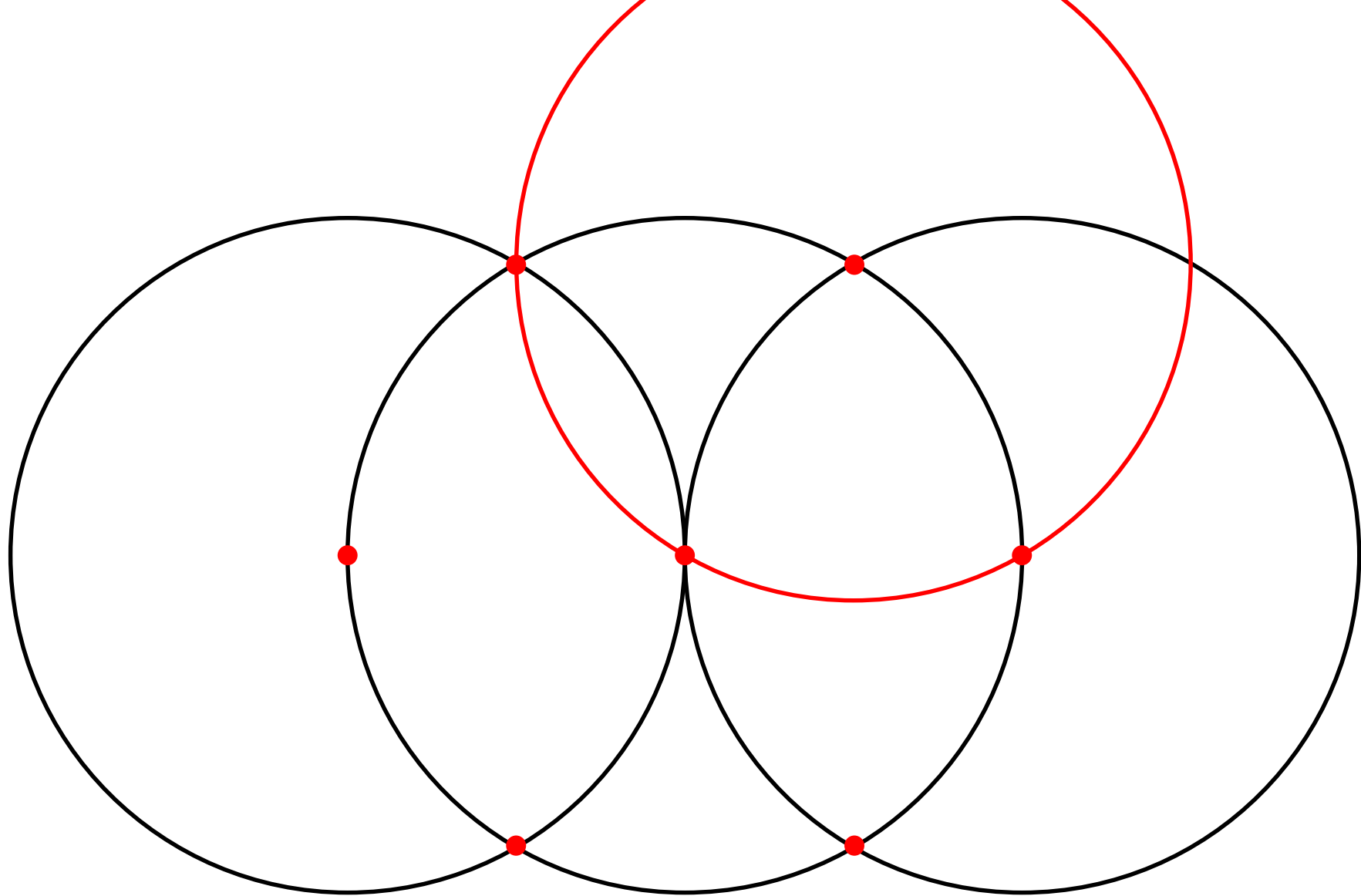


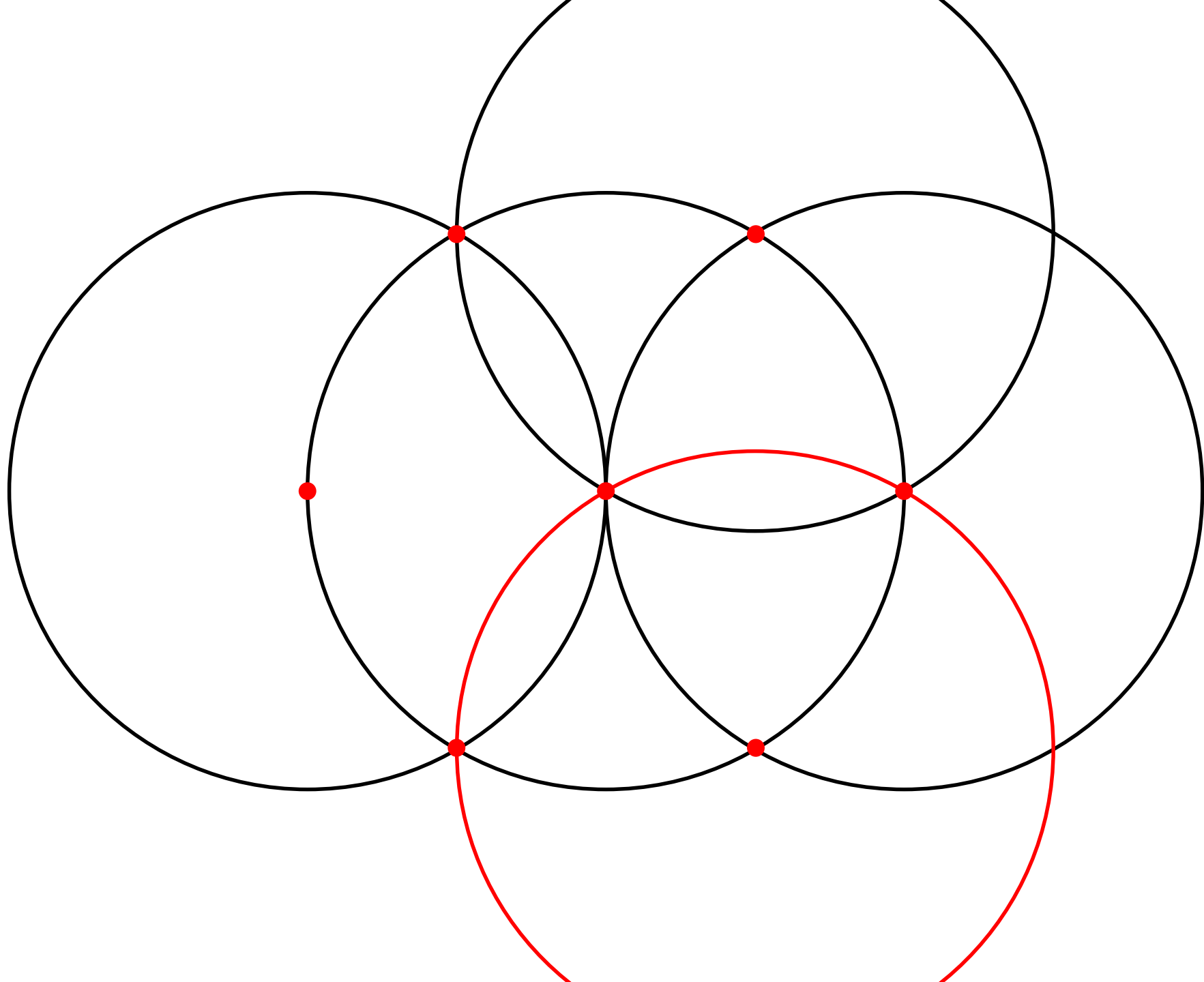


## How to Construct the Flower of Life

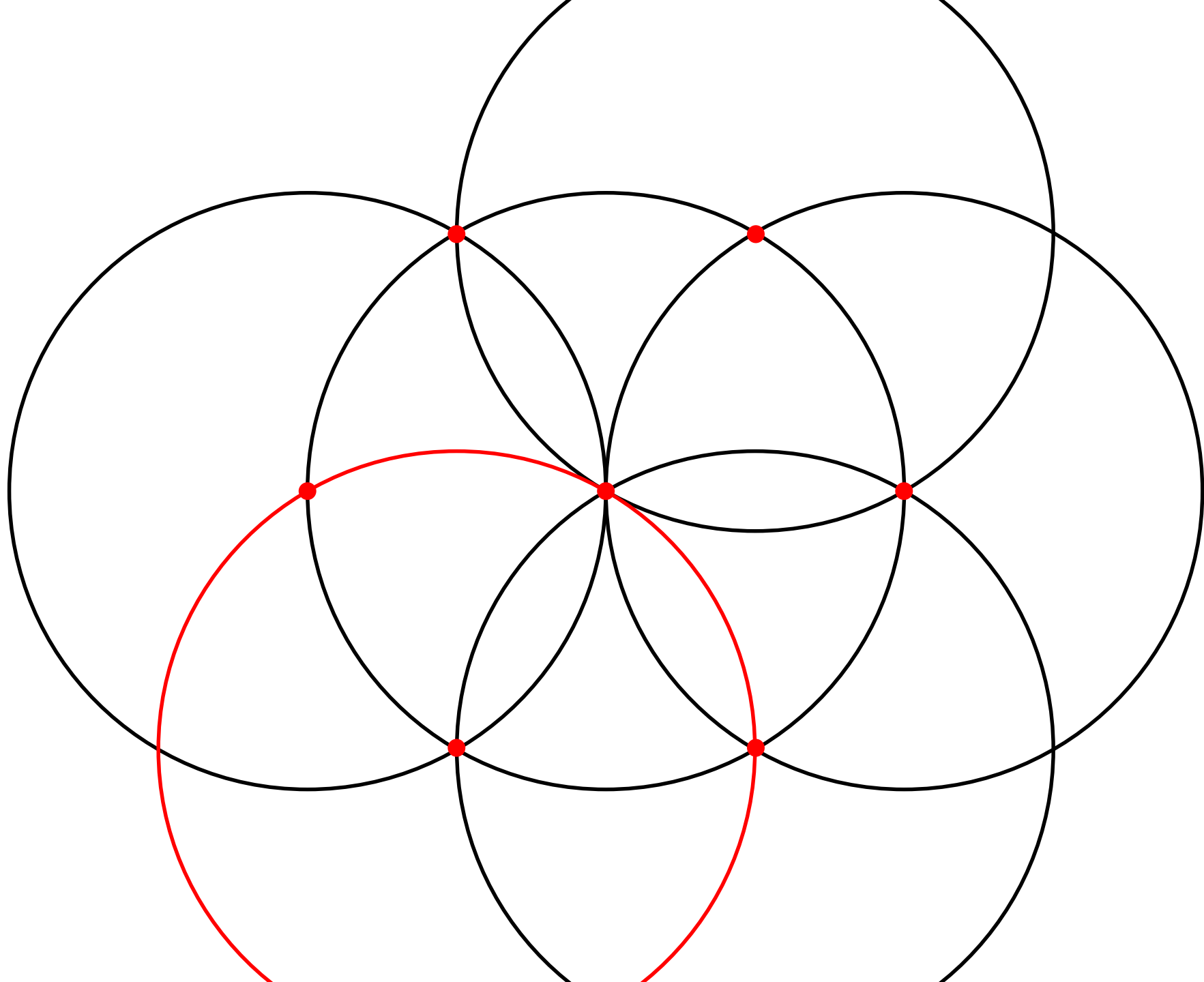


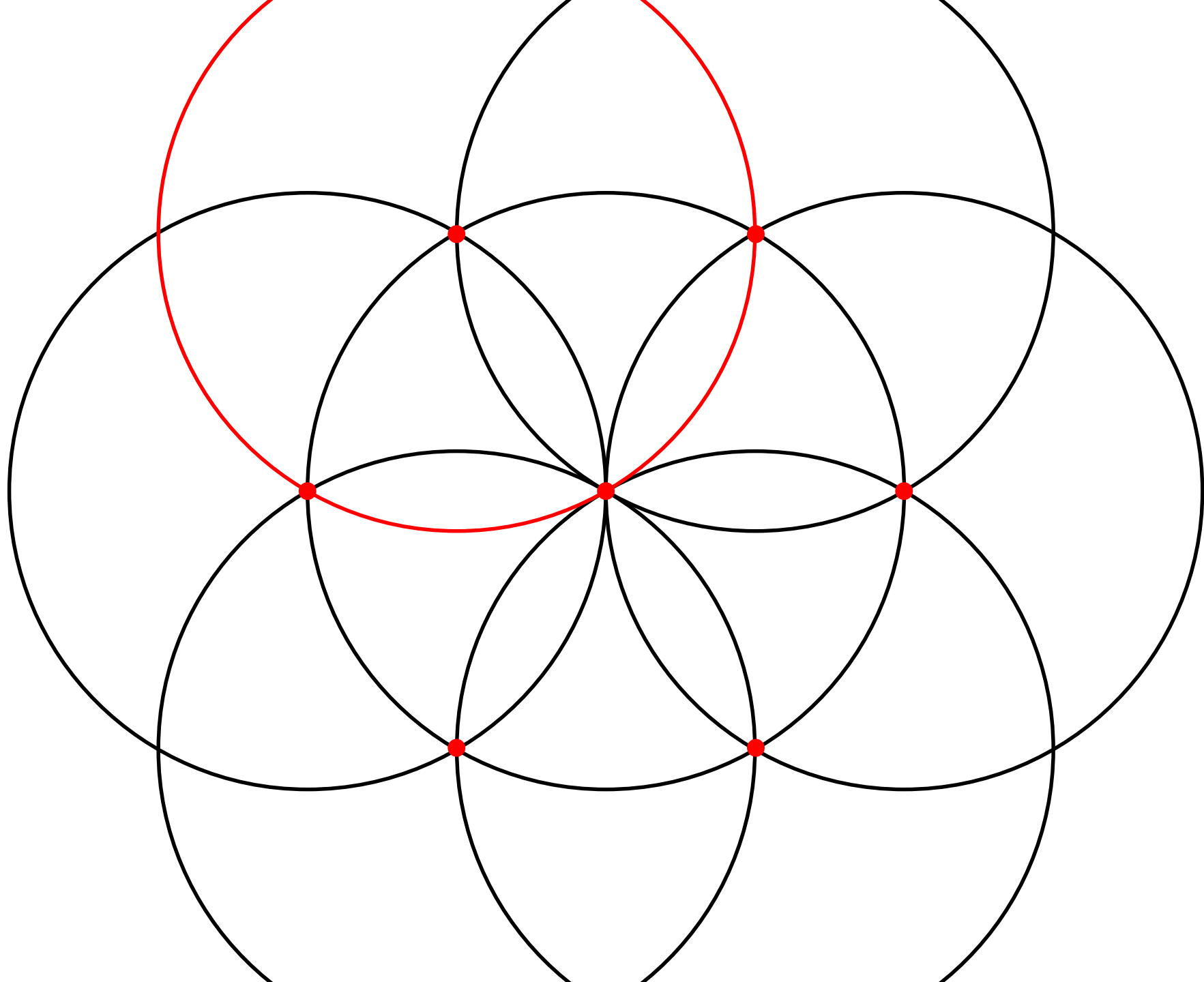




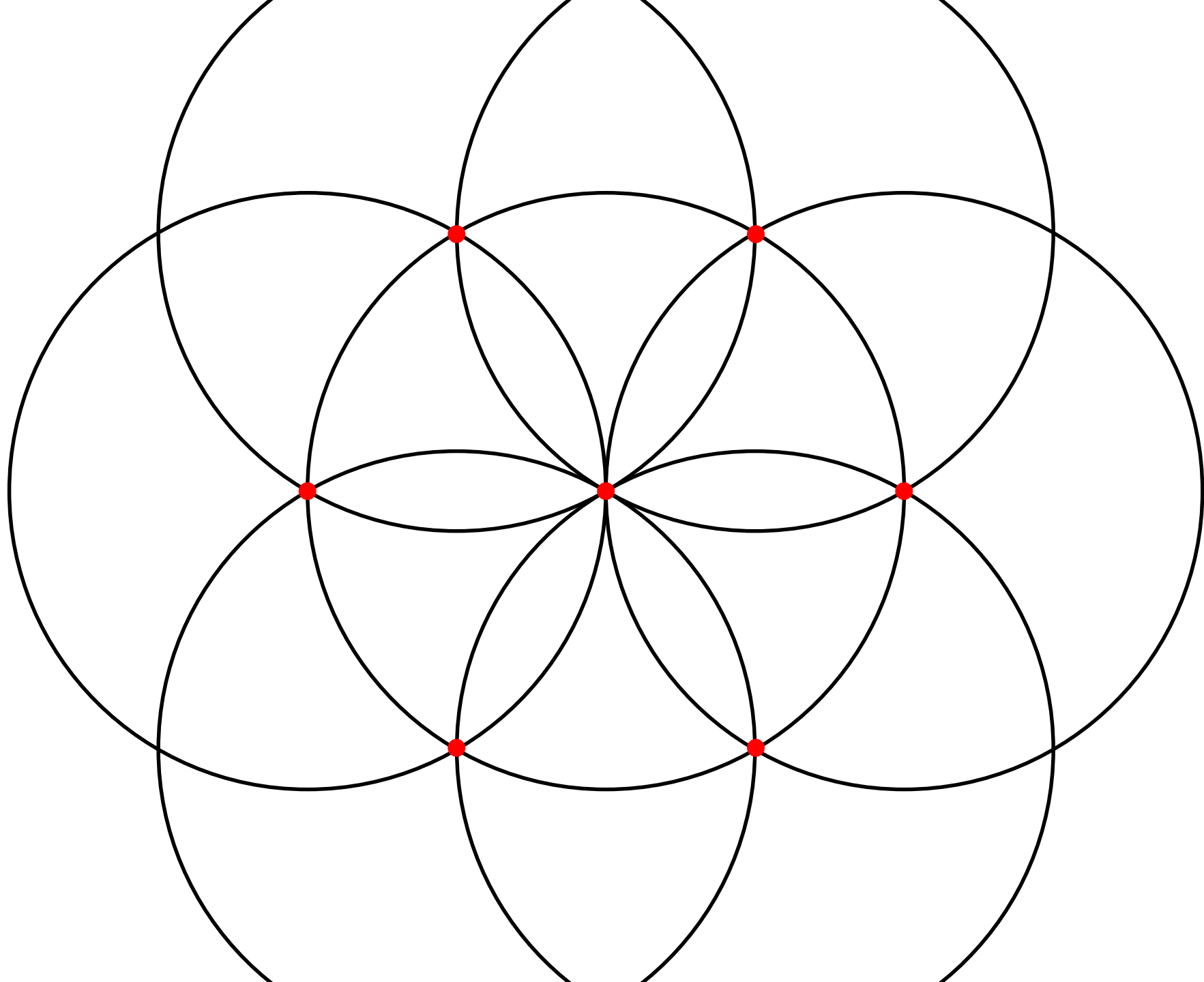






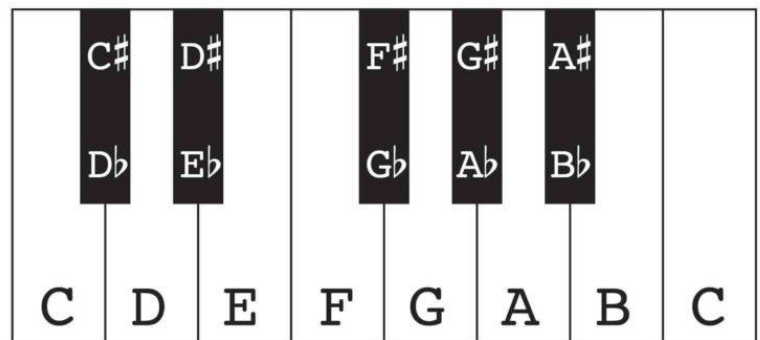
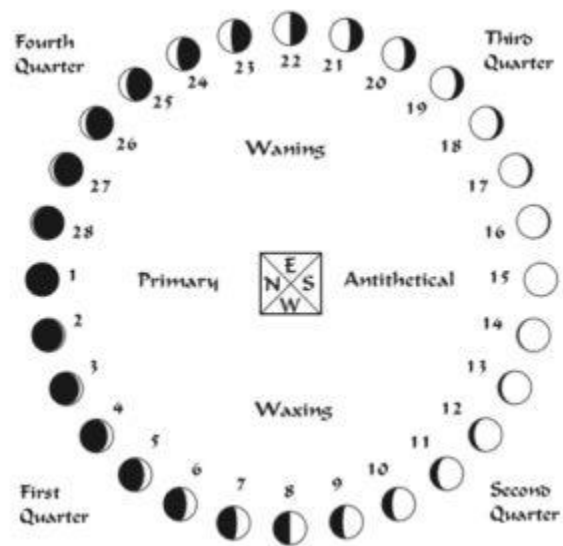






HEPTAD

“7”







Saturn – Saturday



Jupiter – Thursday



Mars – Tuesday



Sun – Sunday



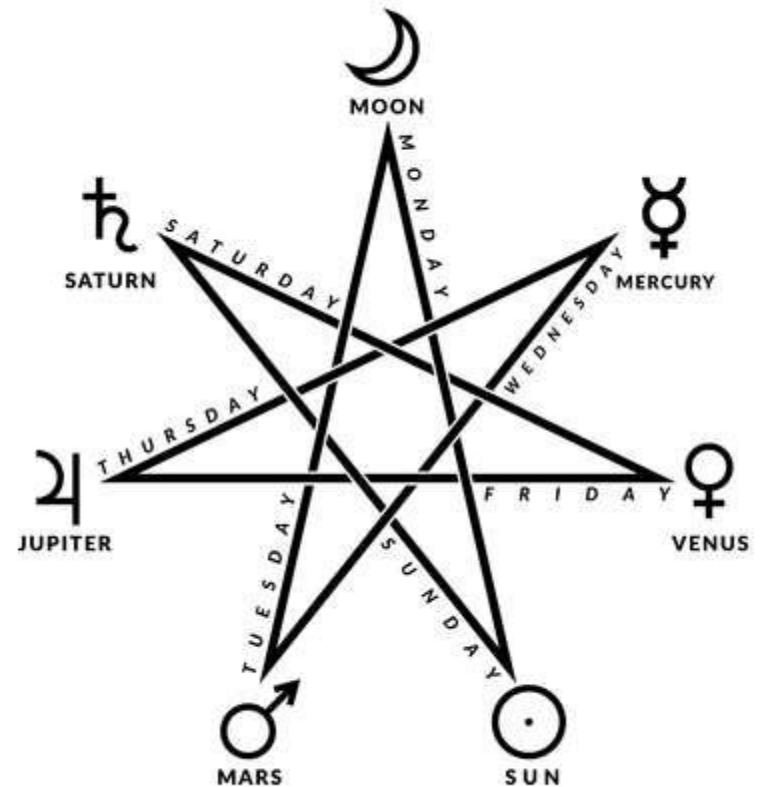
Venus – Friday

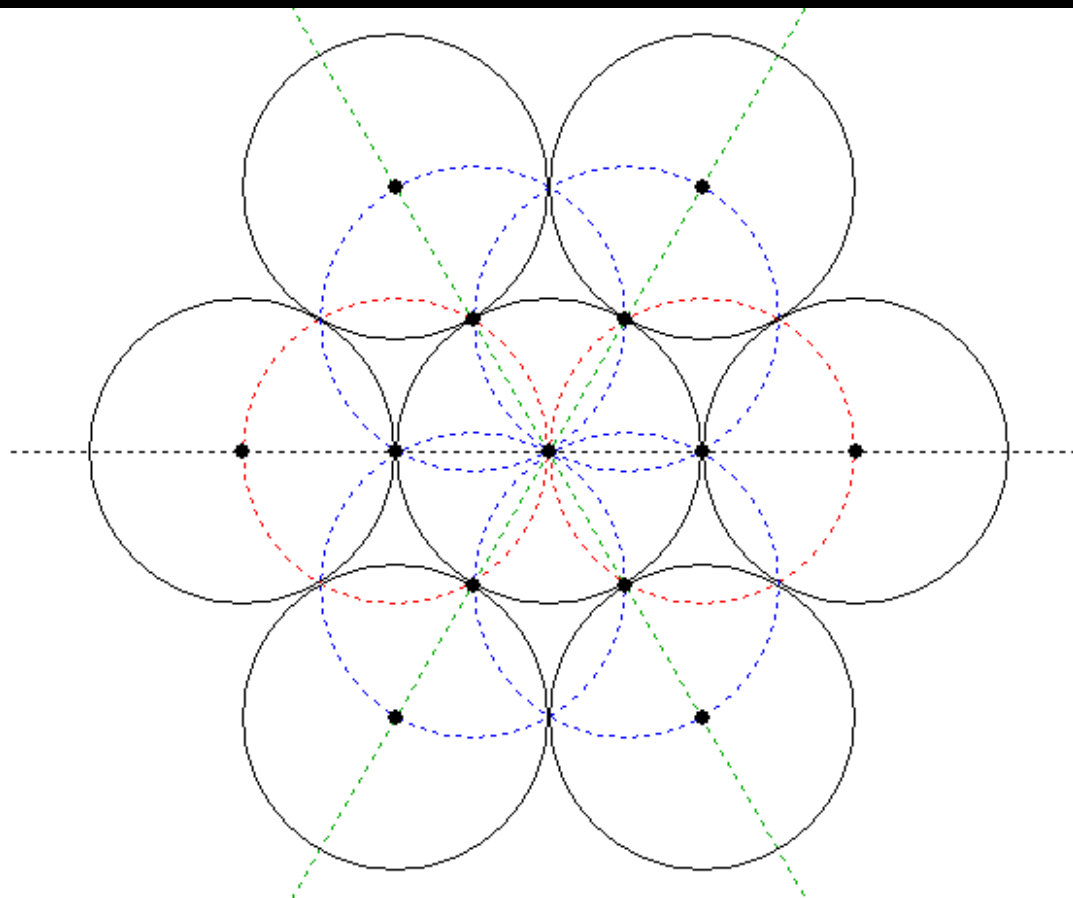
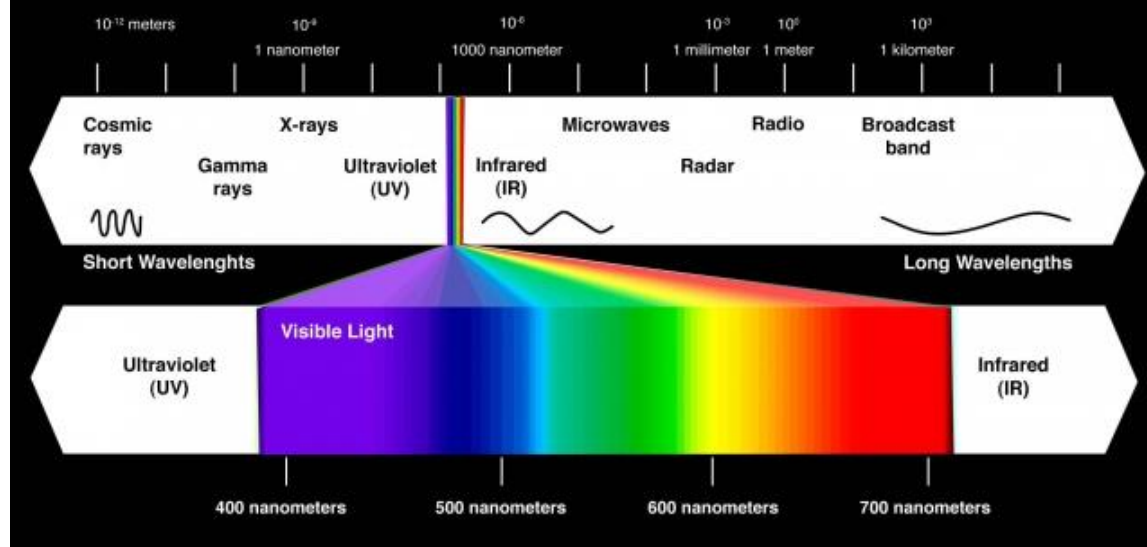


Mercury – Wednesday

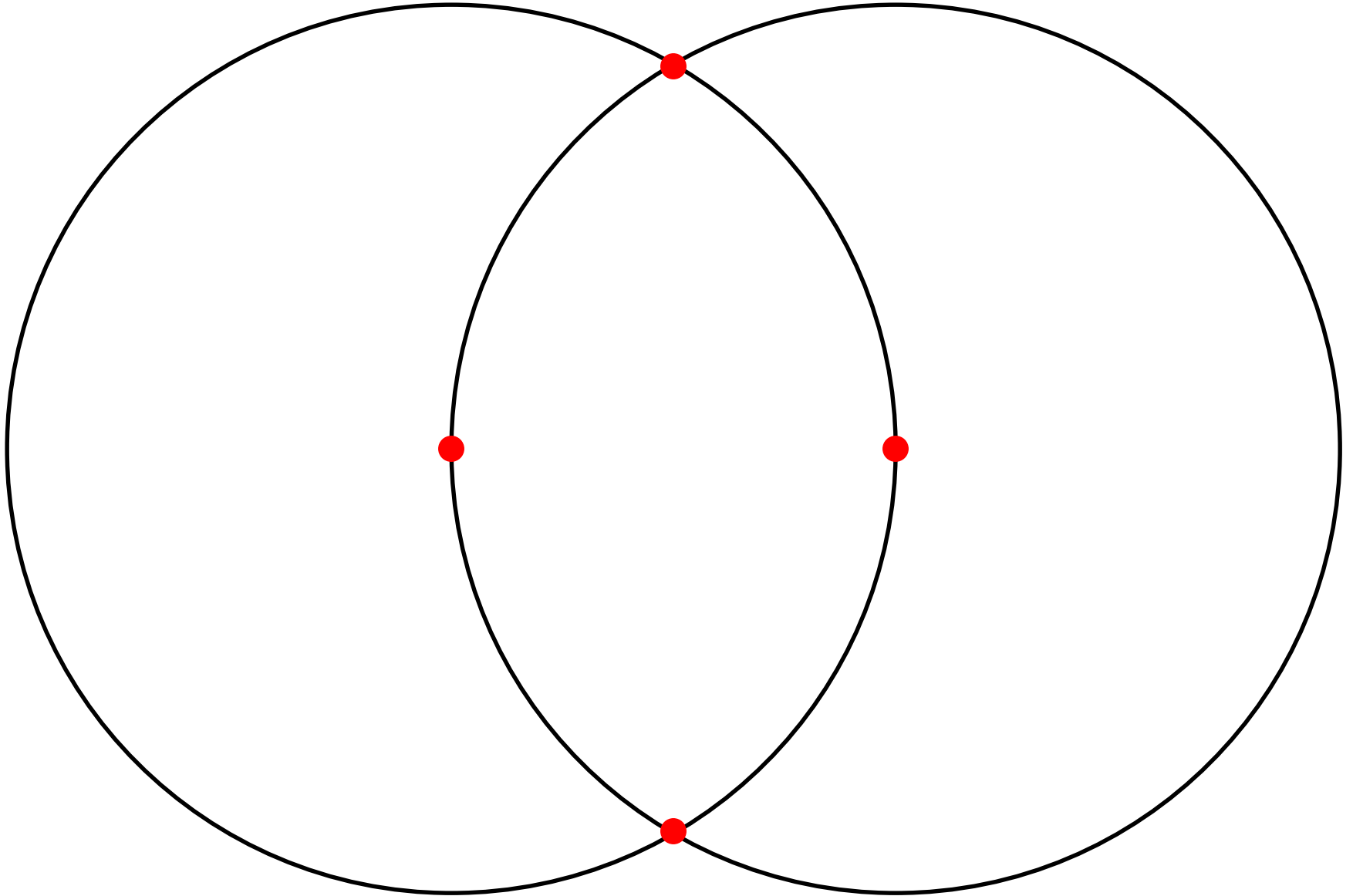


Moon – Monday

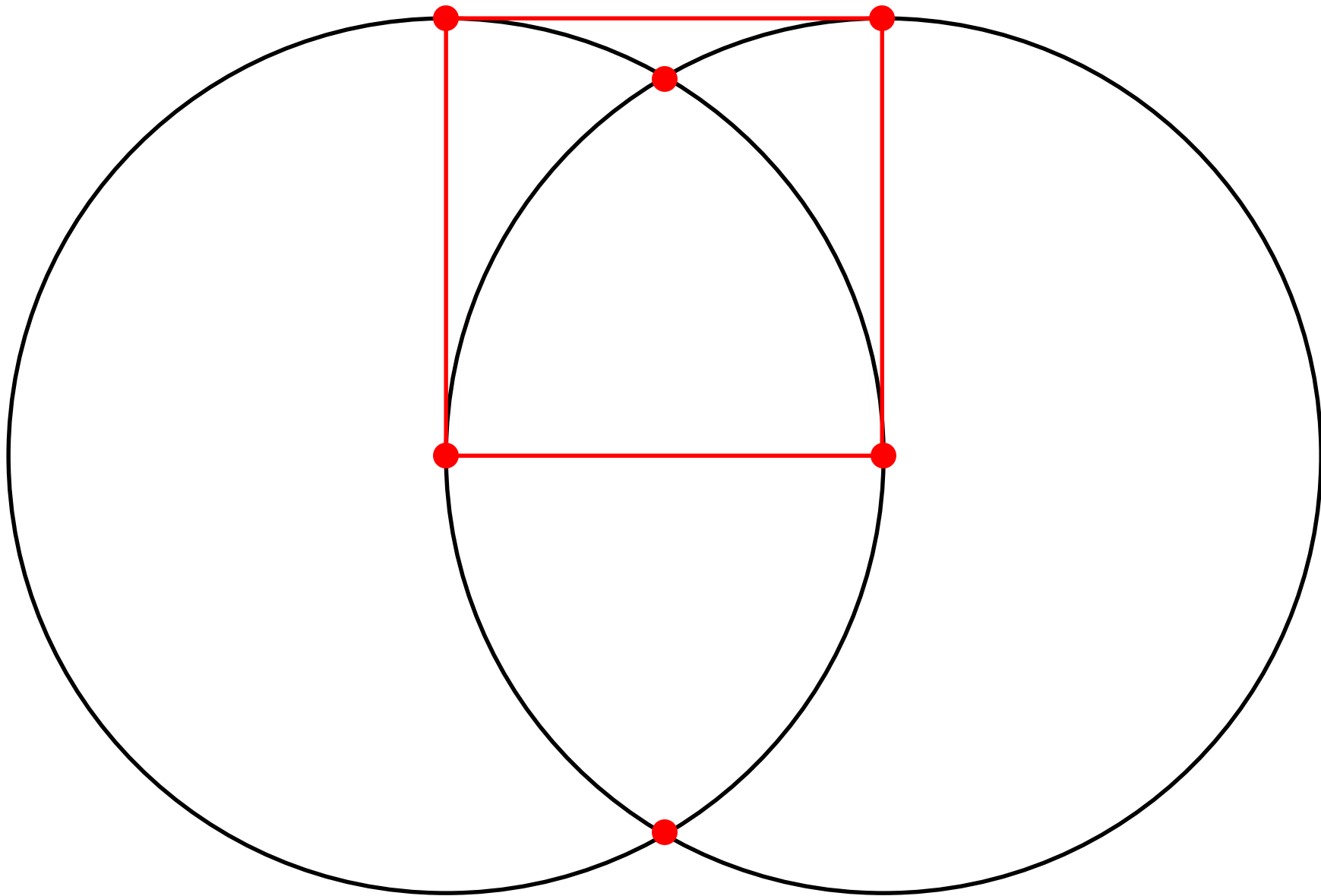


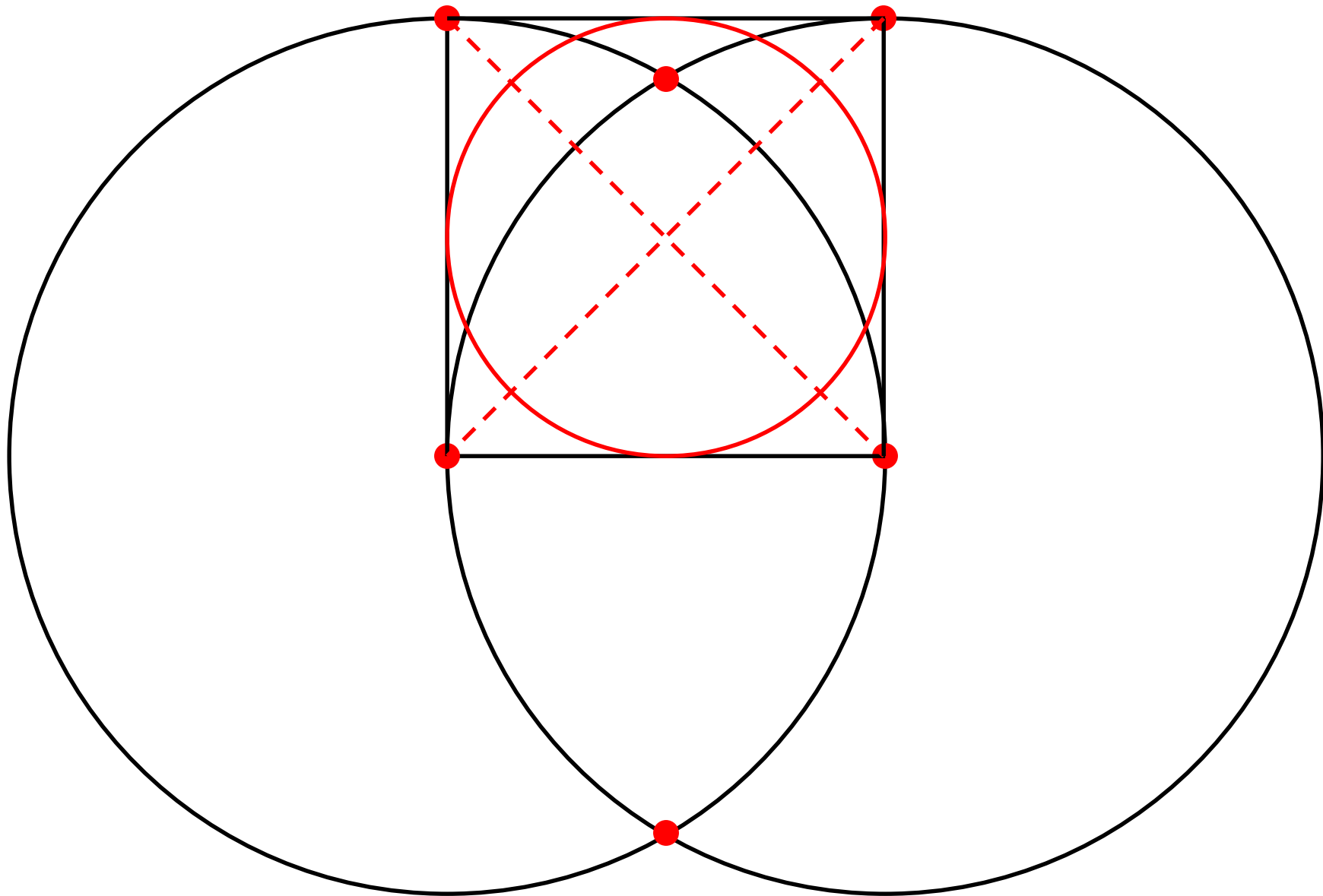


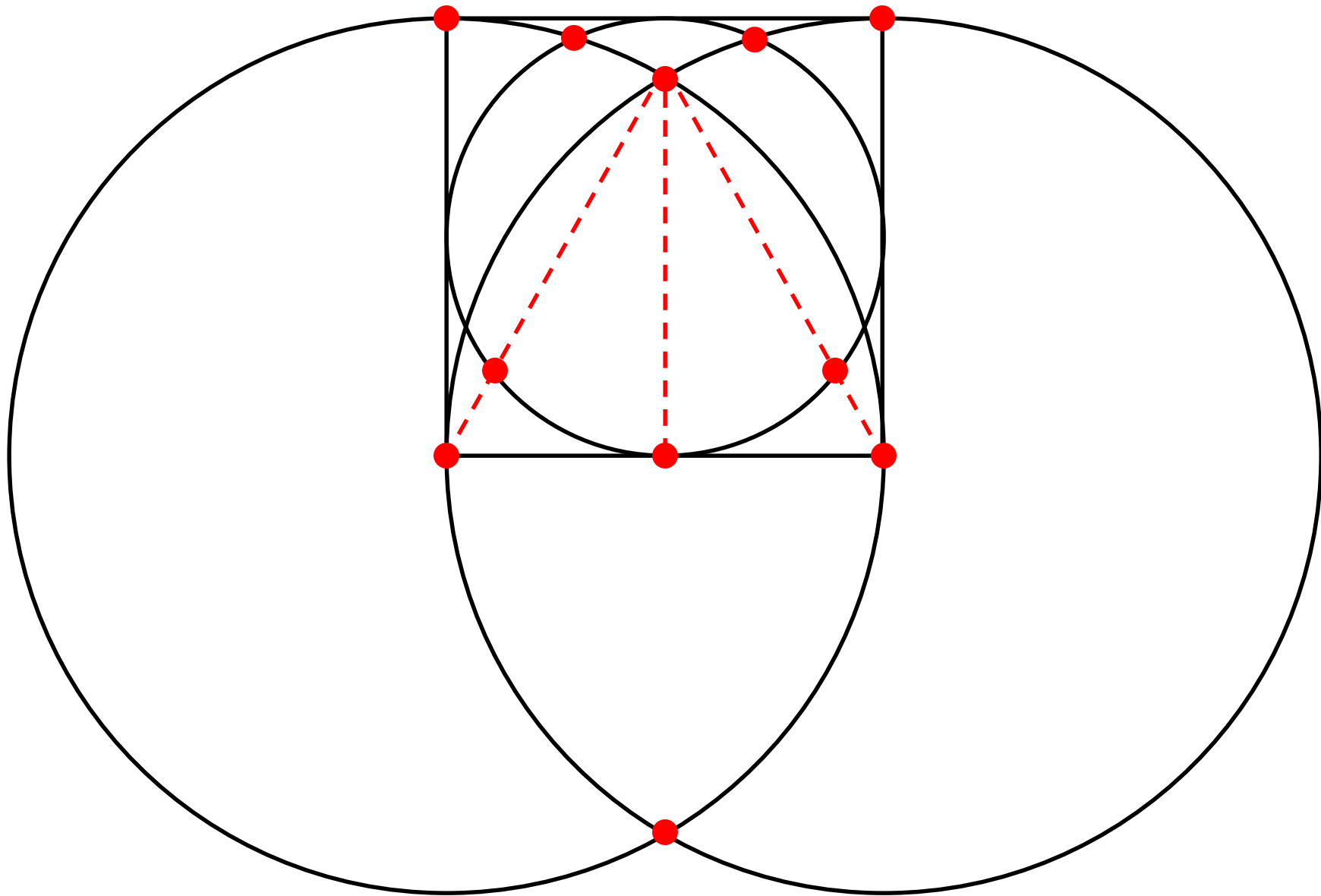
# How to Construct the Heptagon



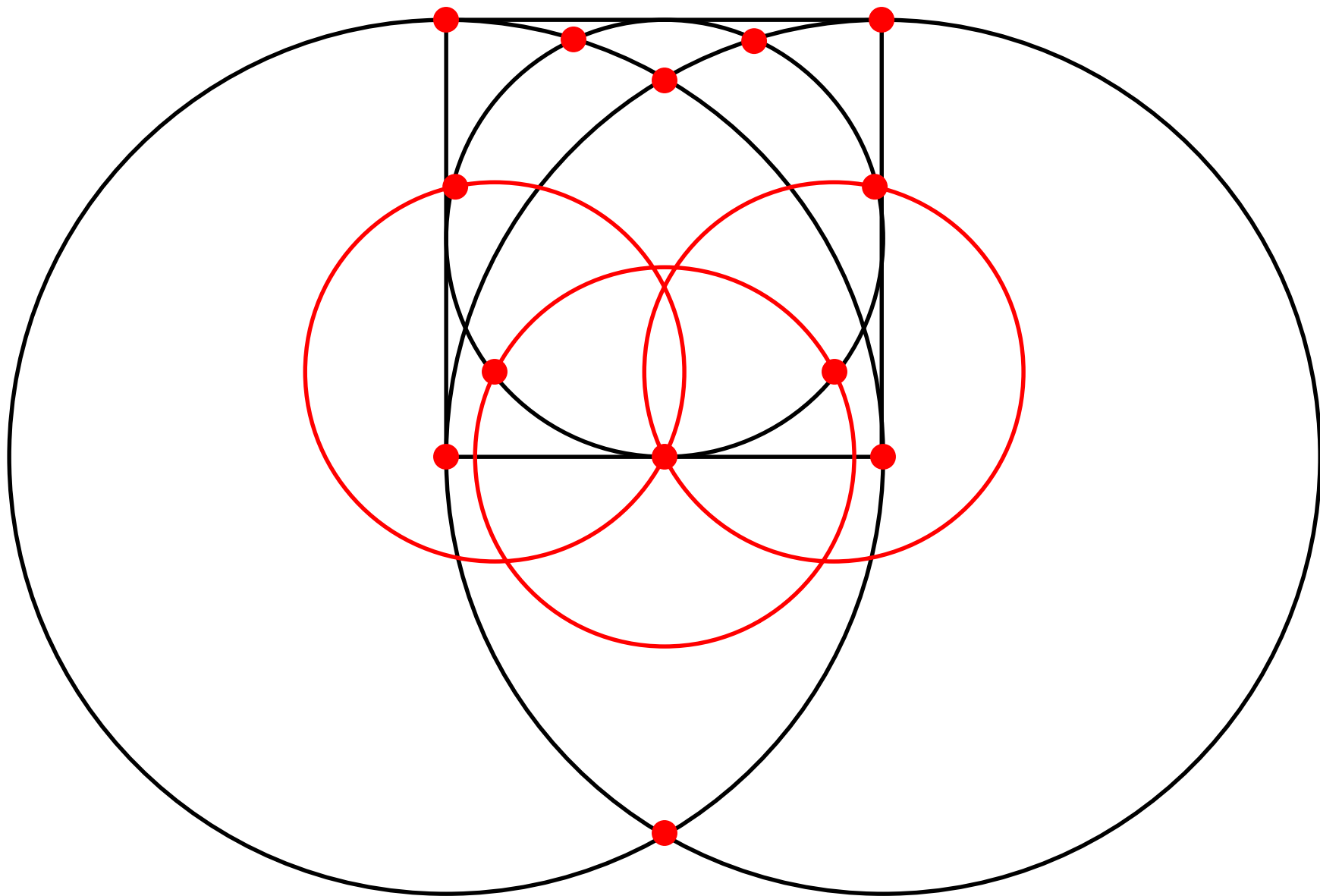


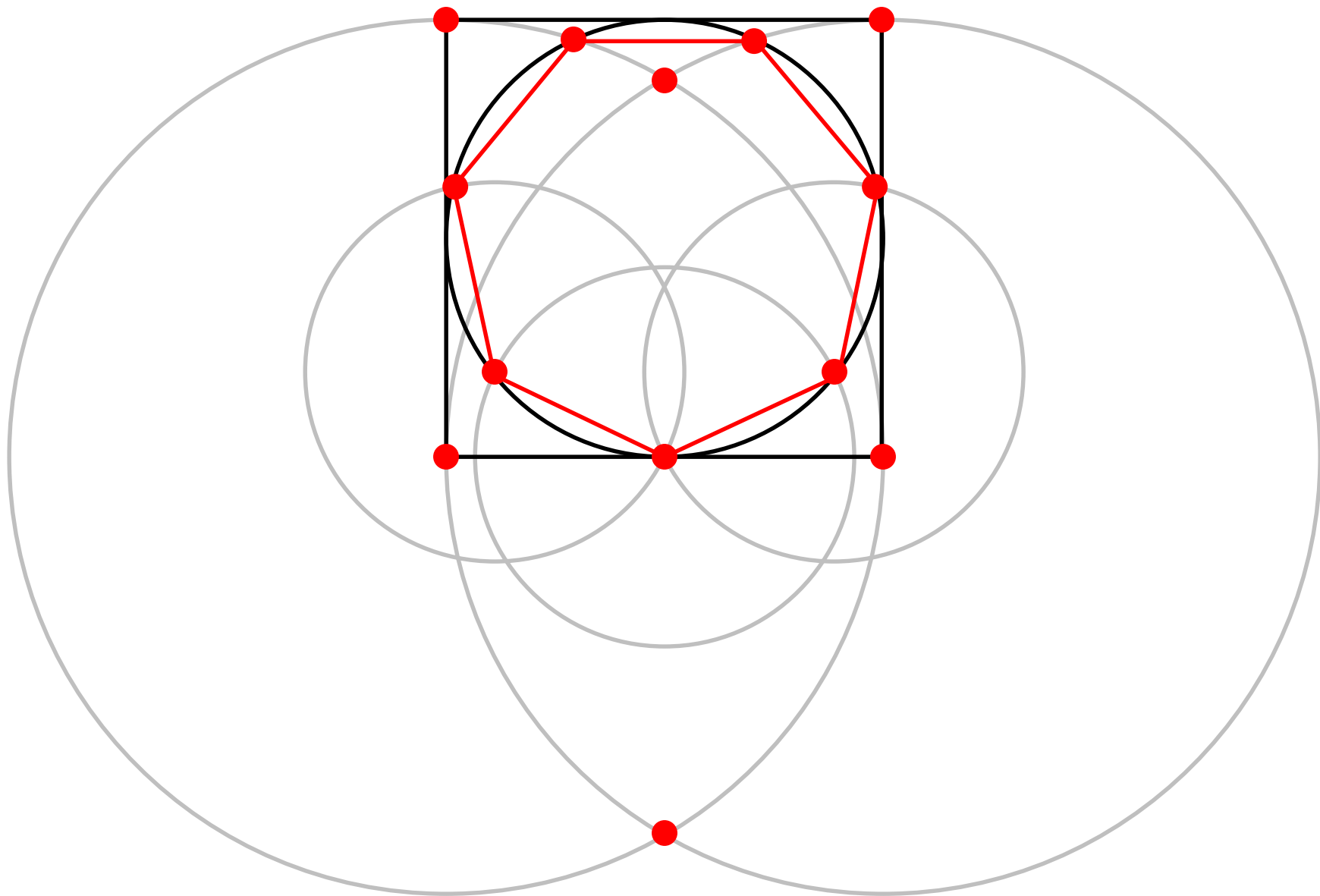








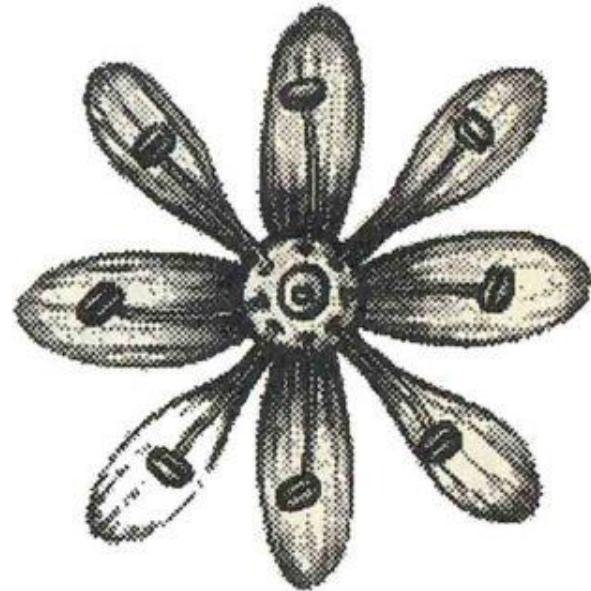
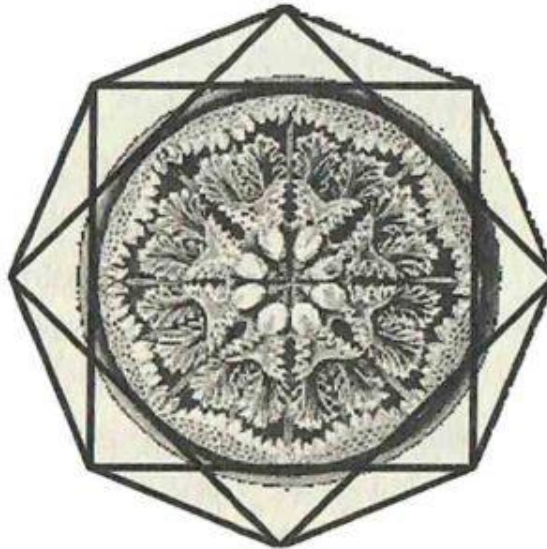
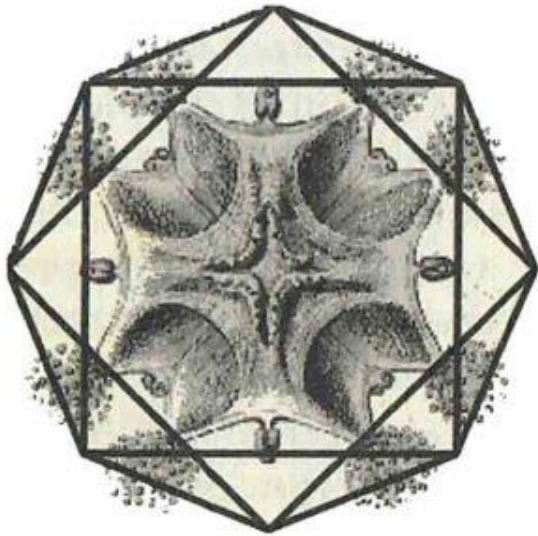
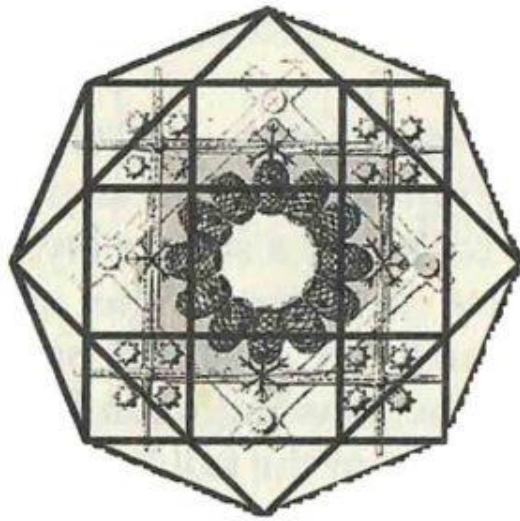
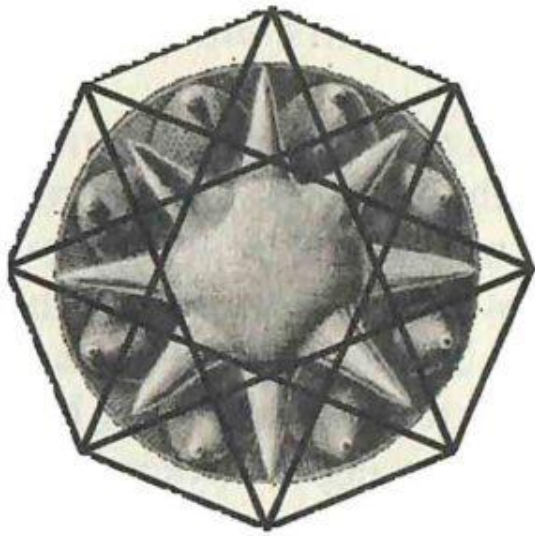




OCTAD

“8”

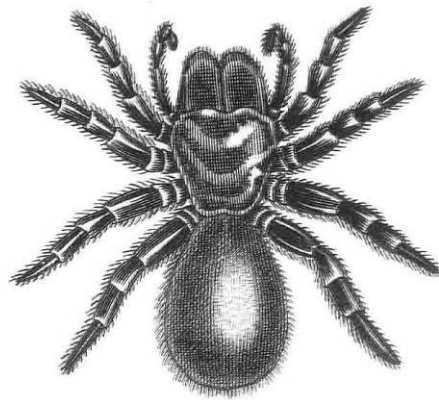
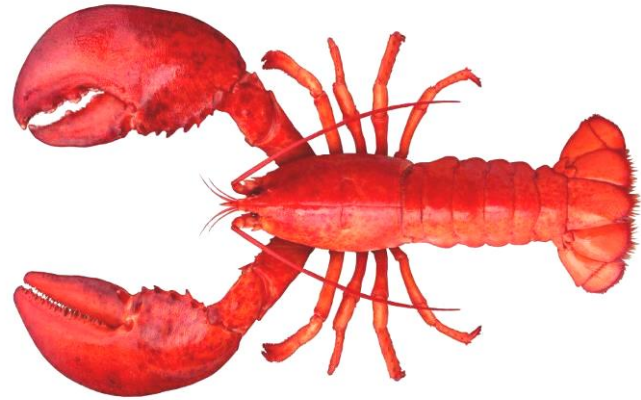
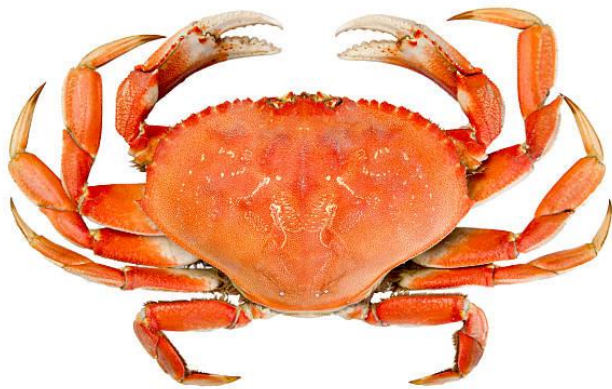




Seen from below, many jellyfishes and "glass" sponges display octagonal structure.

Male maple flower





Waxing  
Gibbous  
Moon



First  
Quarter  
Half  
Moon



Waxing  
Crescent  
Moon



New  
Moon



Full Moon



Waning  
Gibbous  
Moon



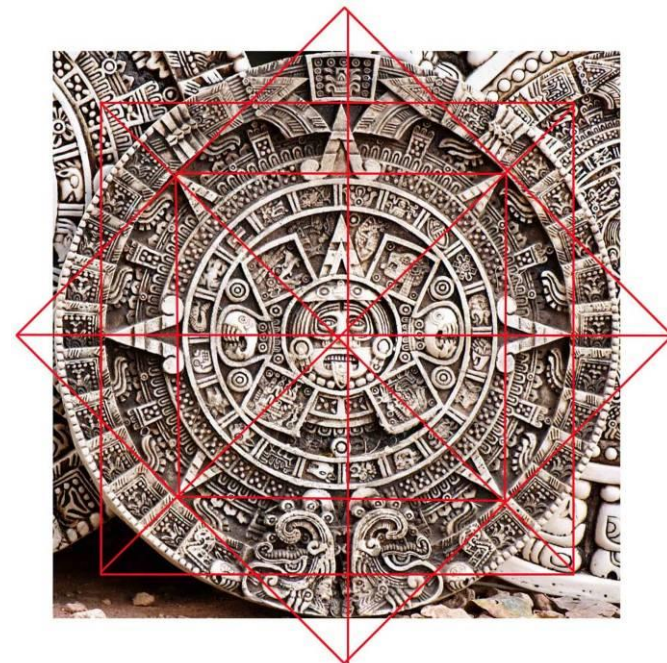
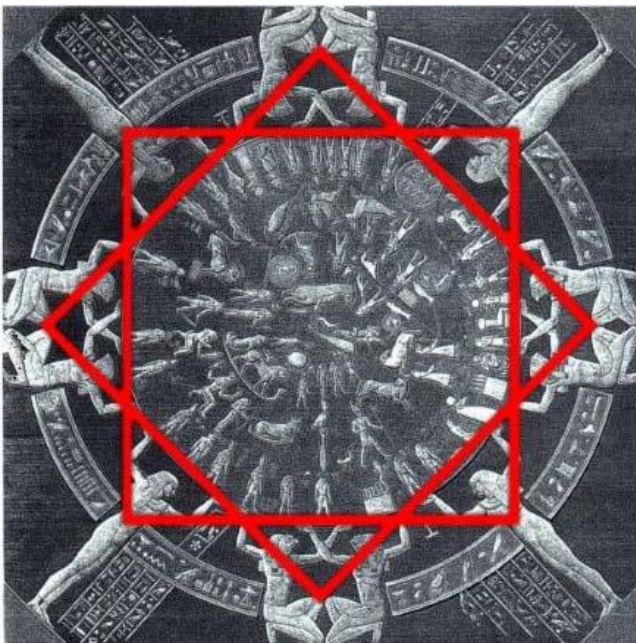
Three  
Quarter  
Half  
Moon



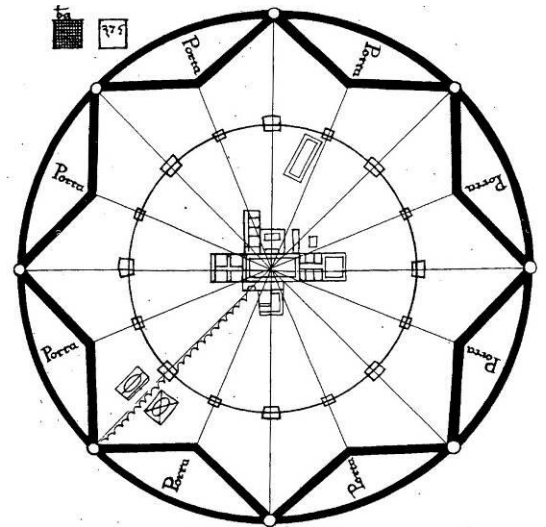
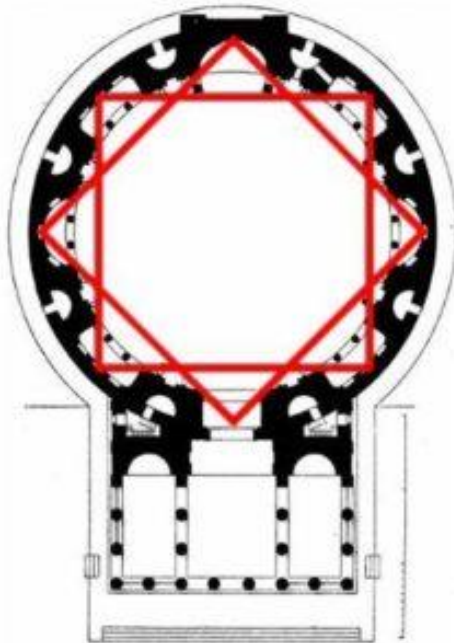
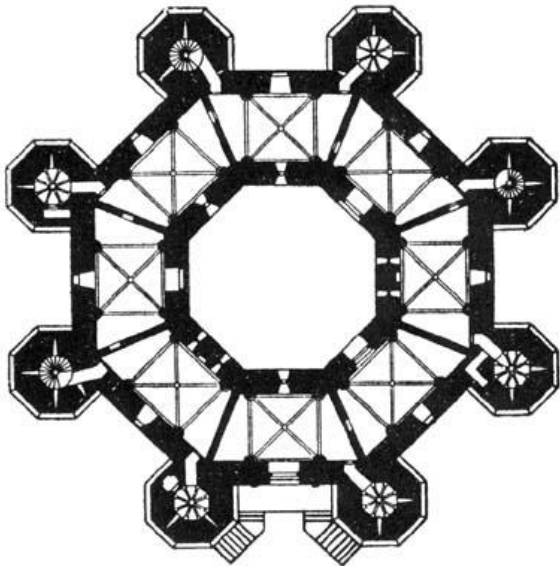
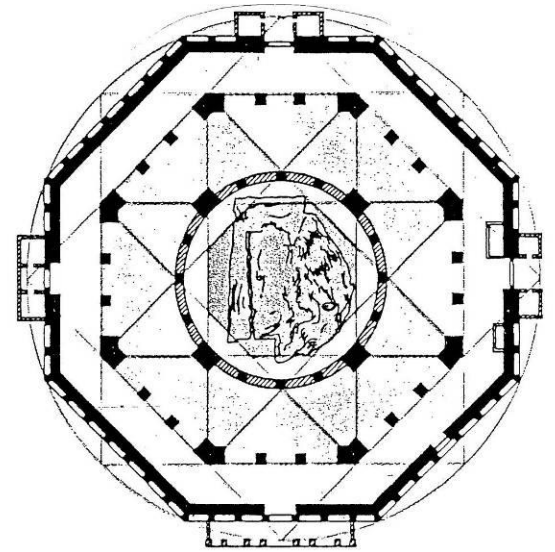
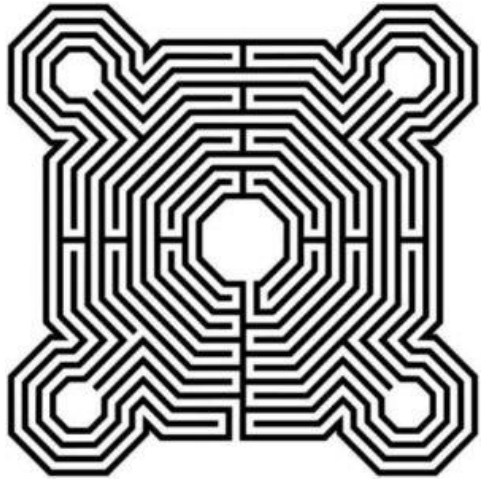
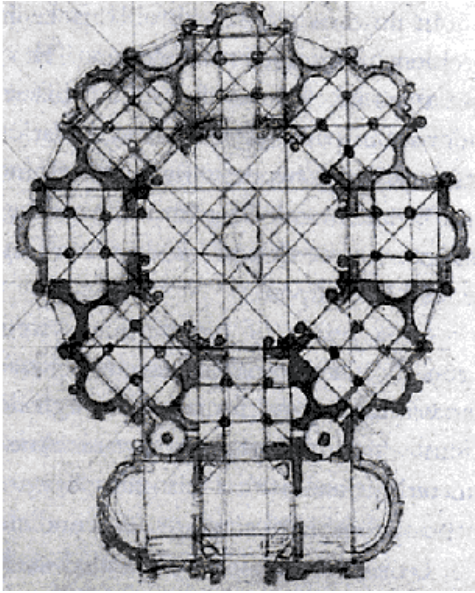
Waning  
Crescent  
Moon







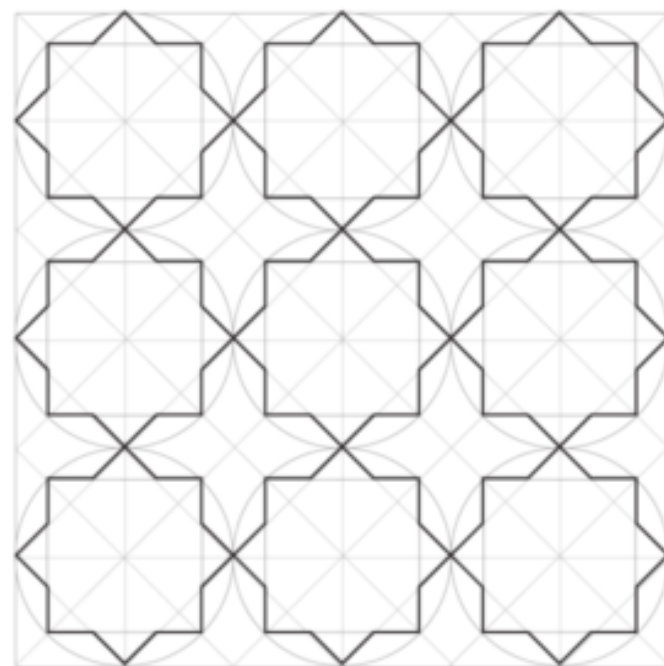
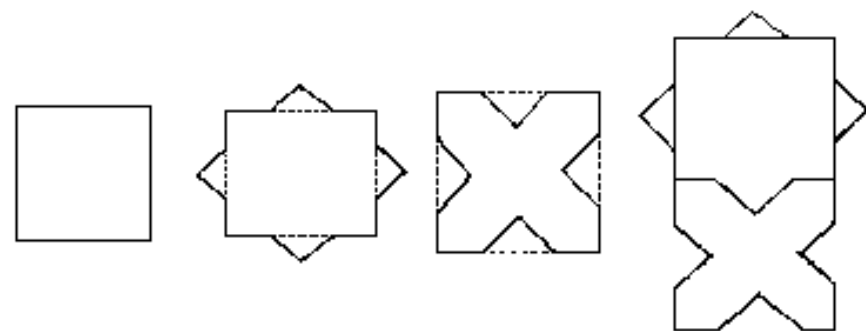




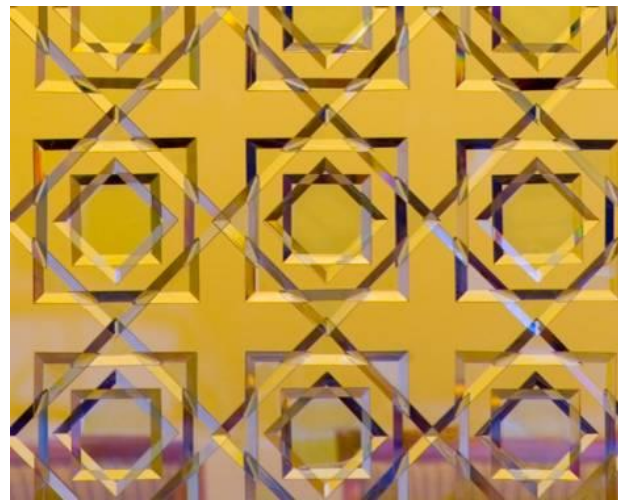
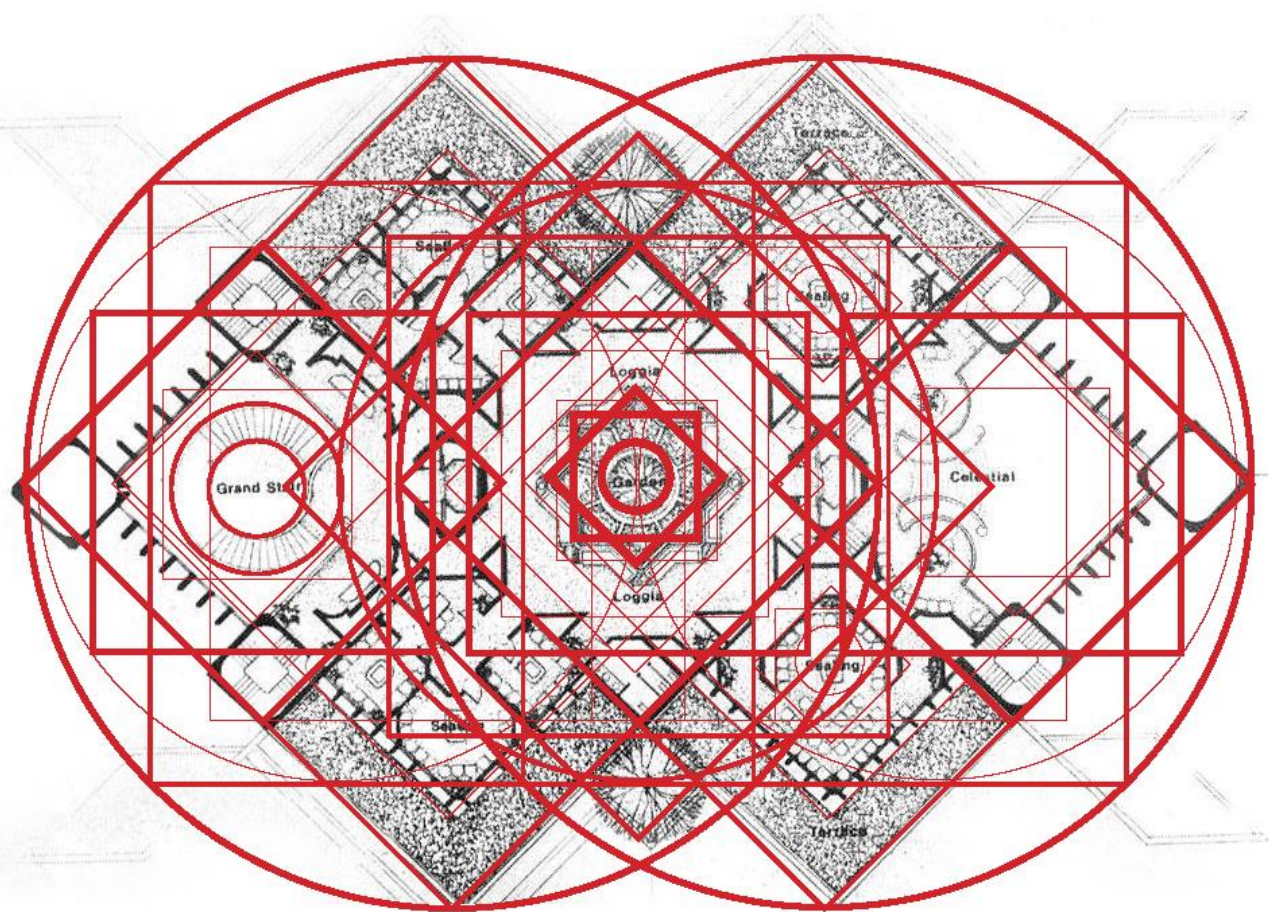




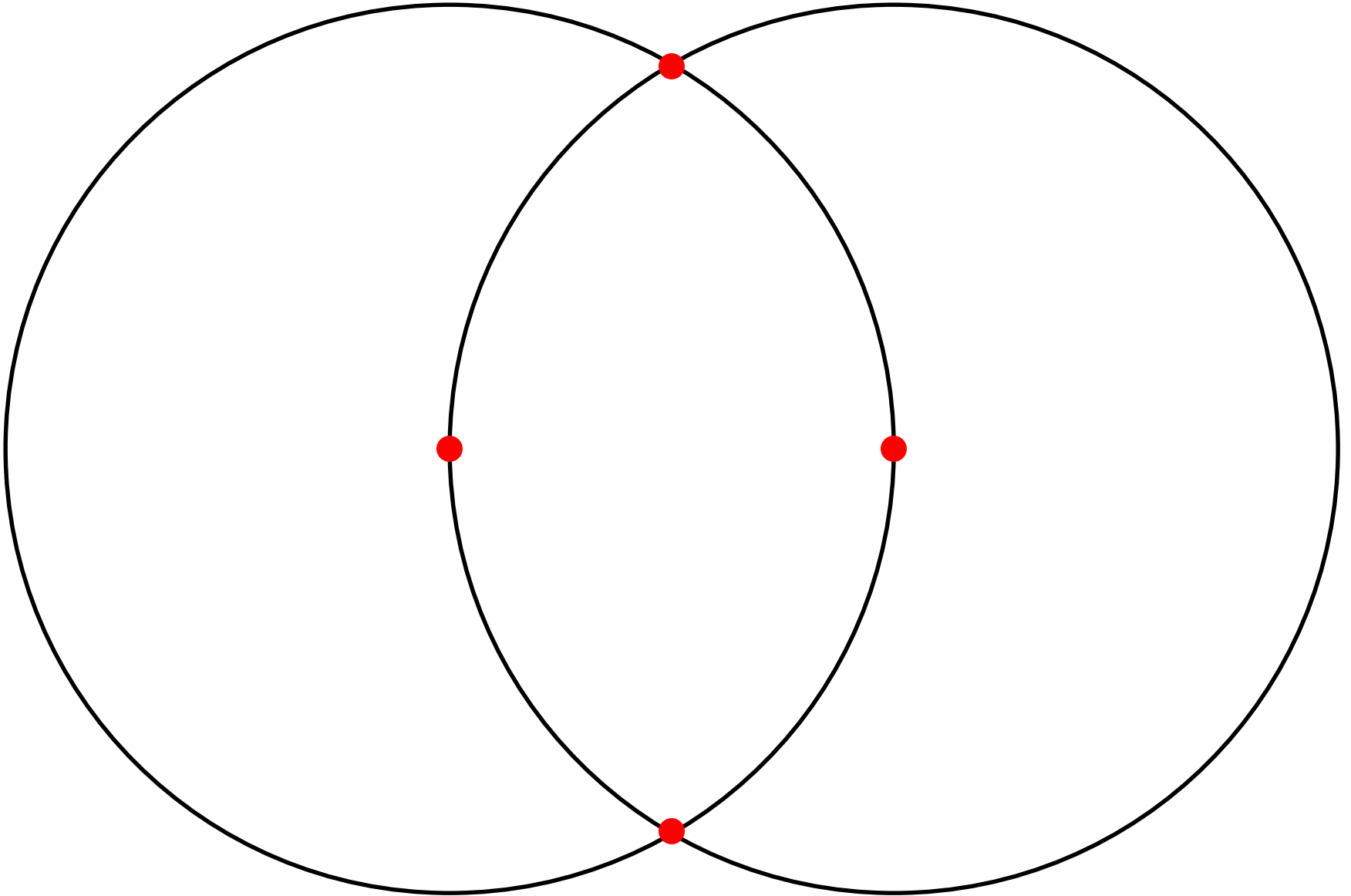




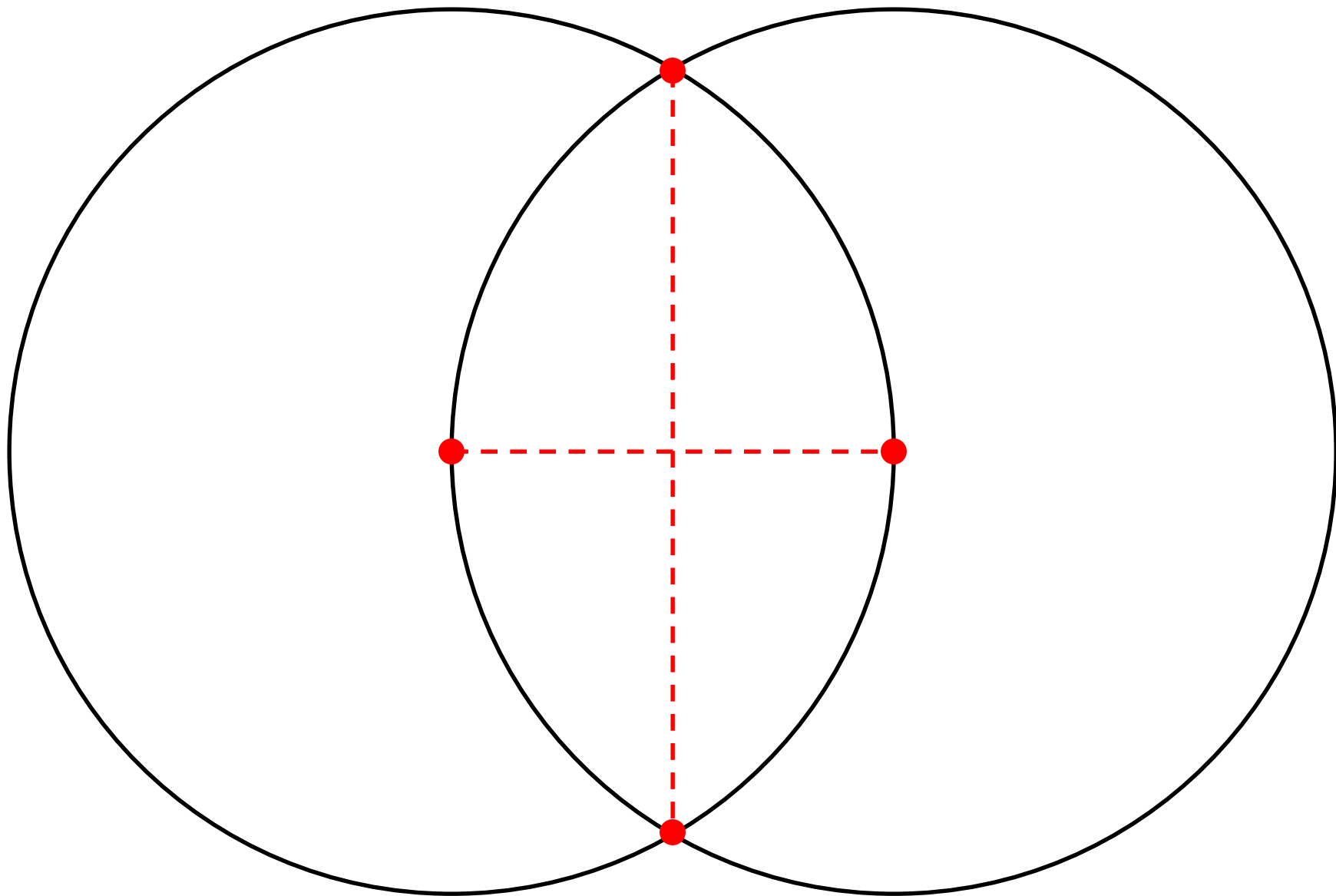


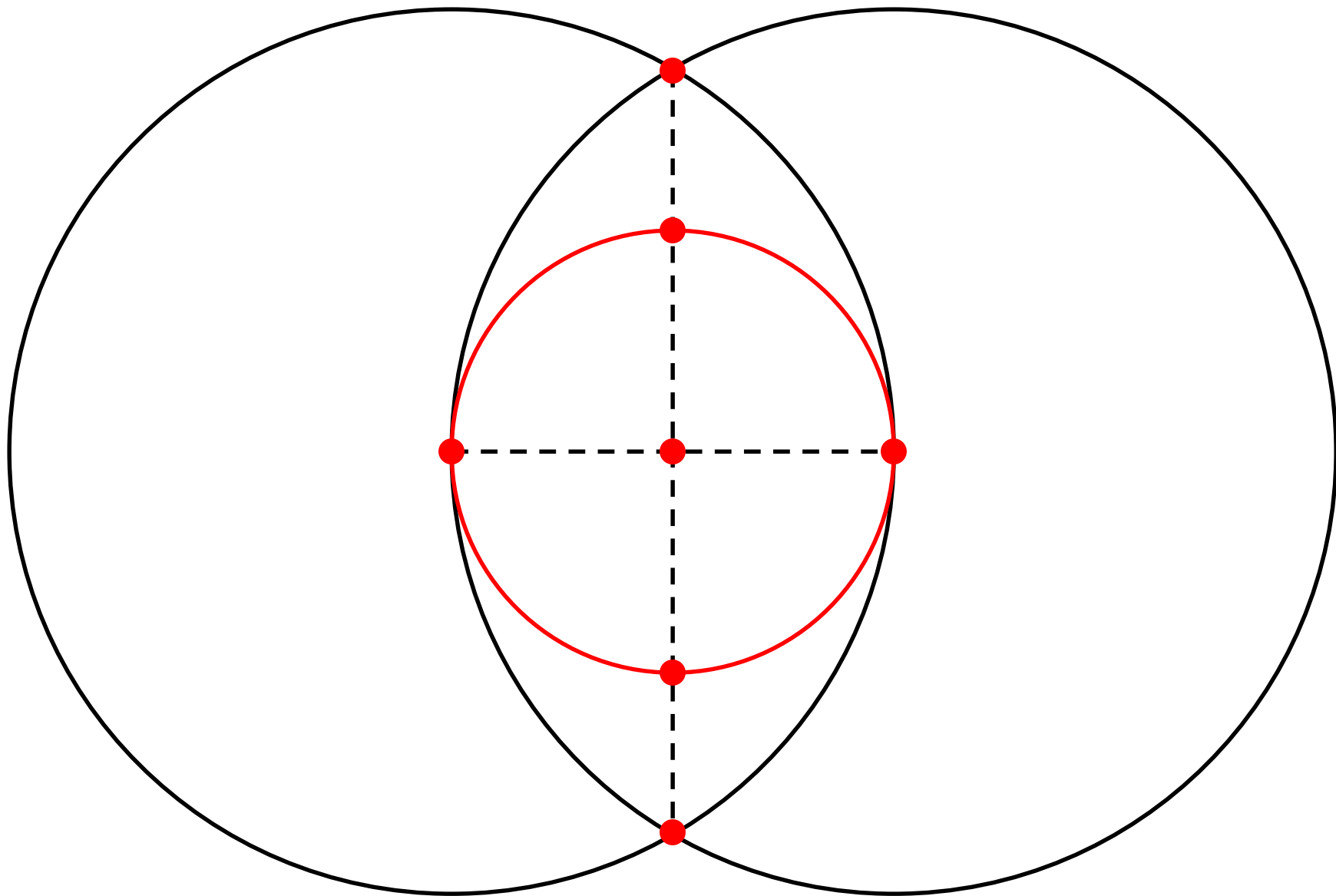


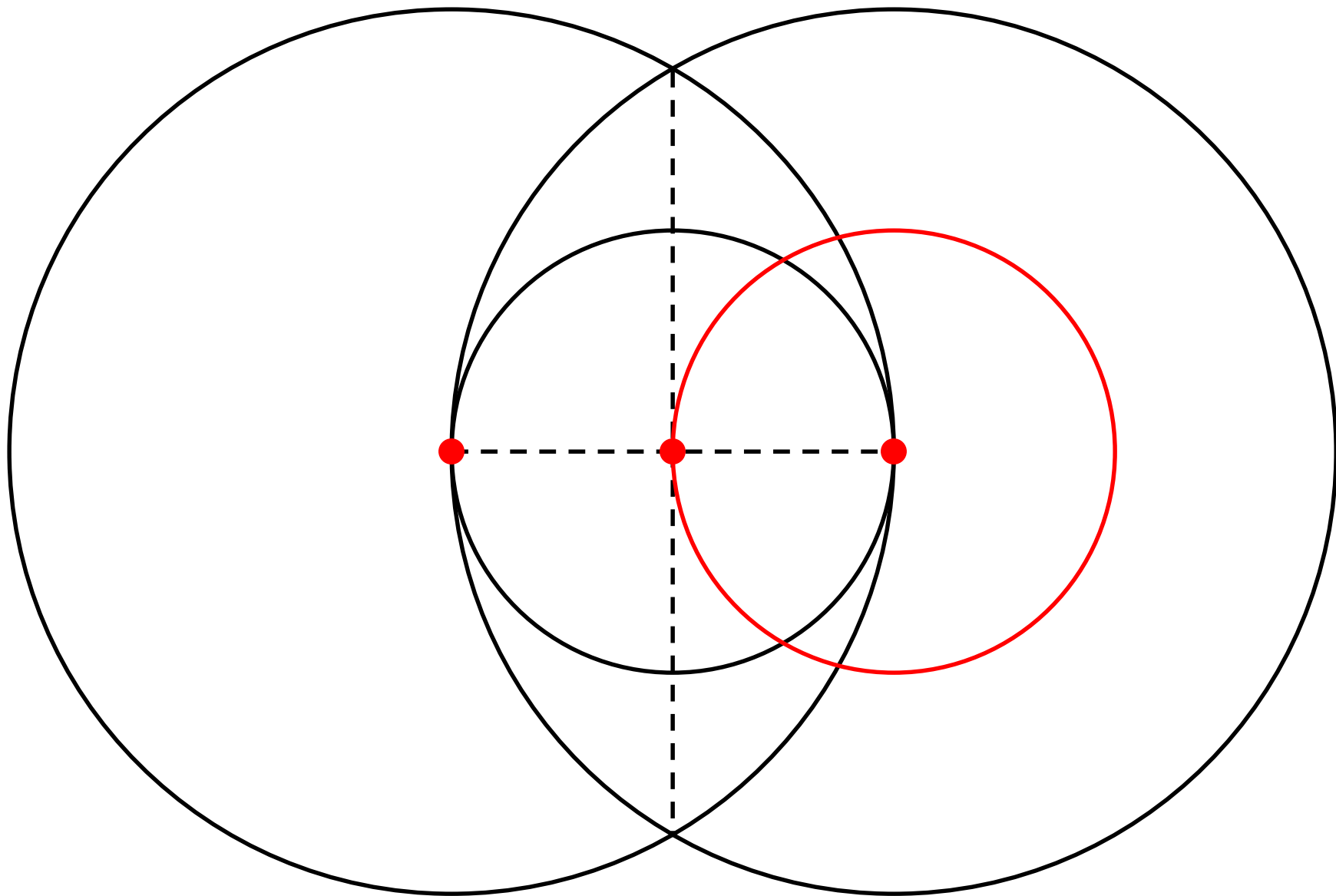
# How to Construct the Octagon



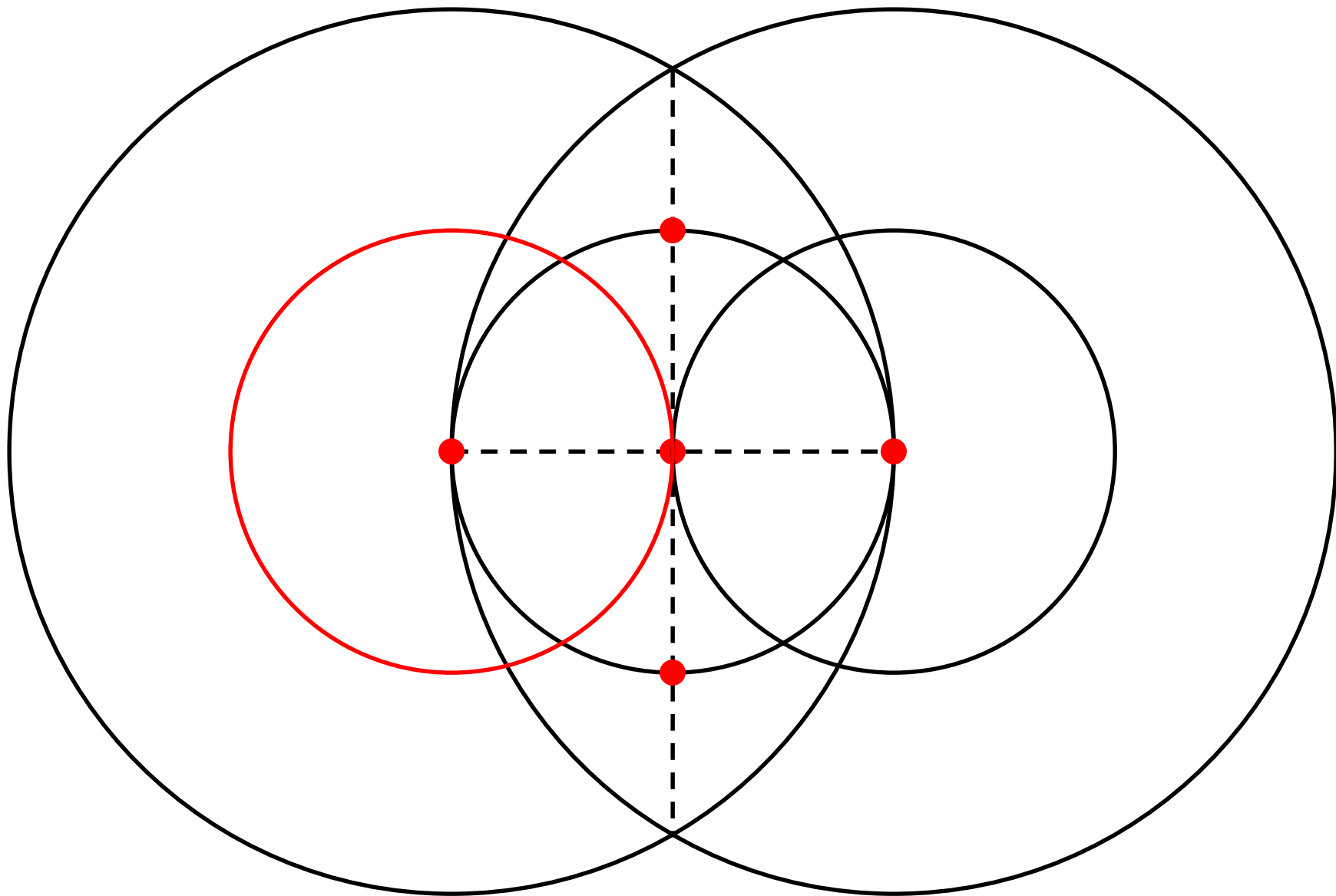


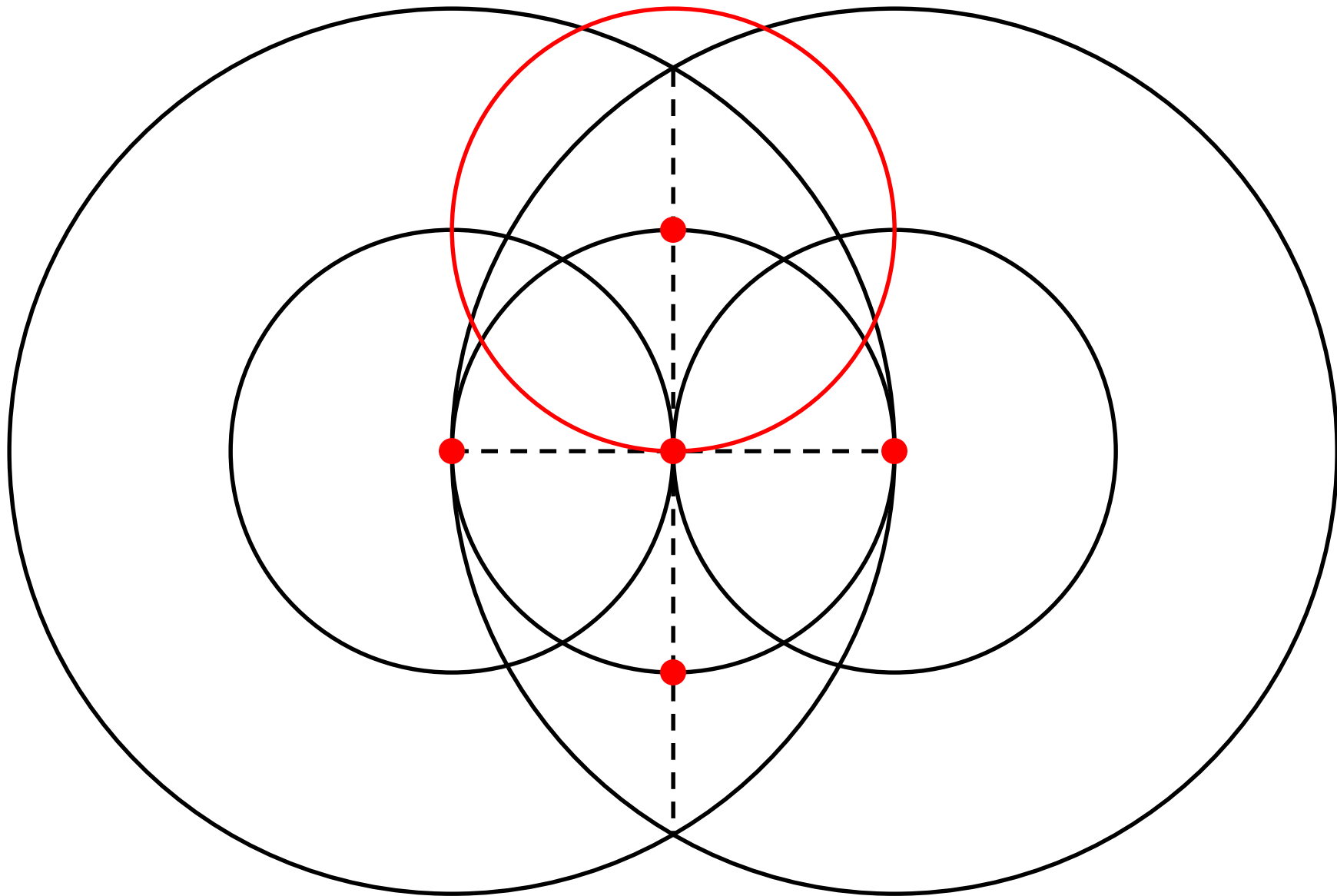


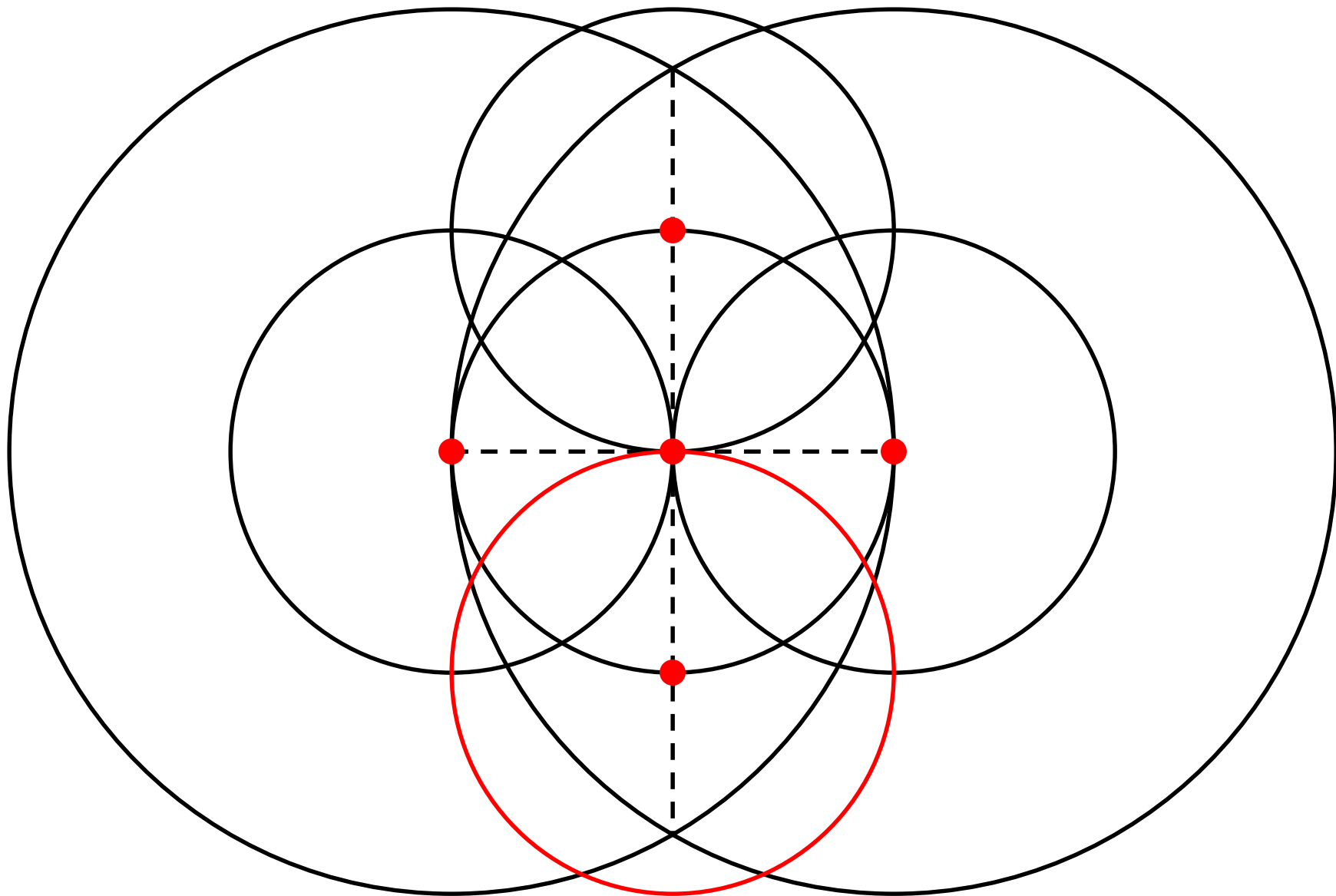




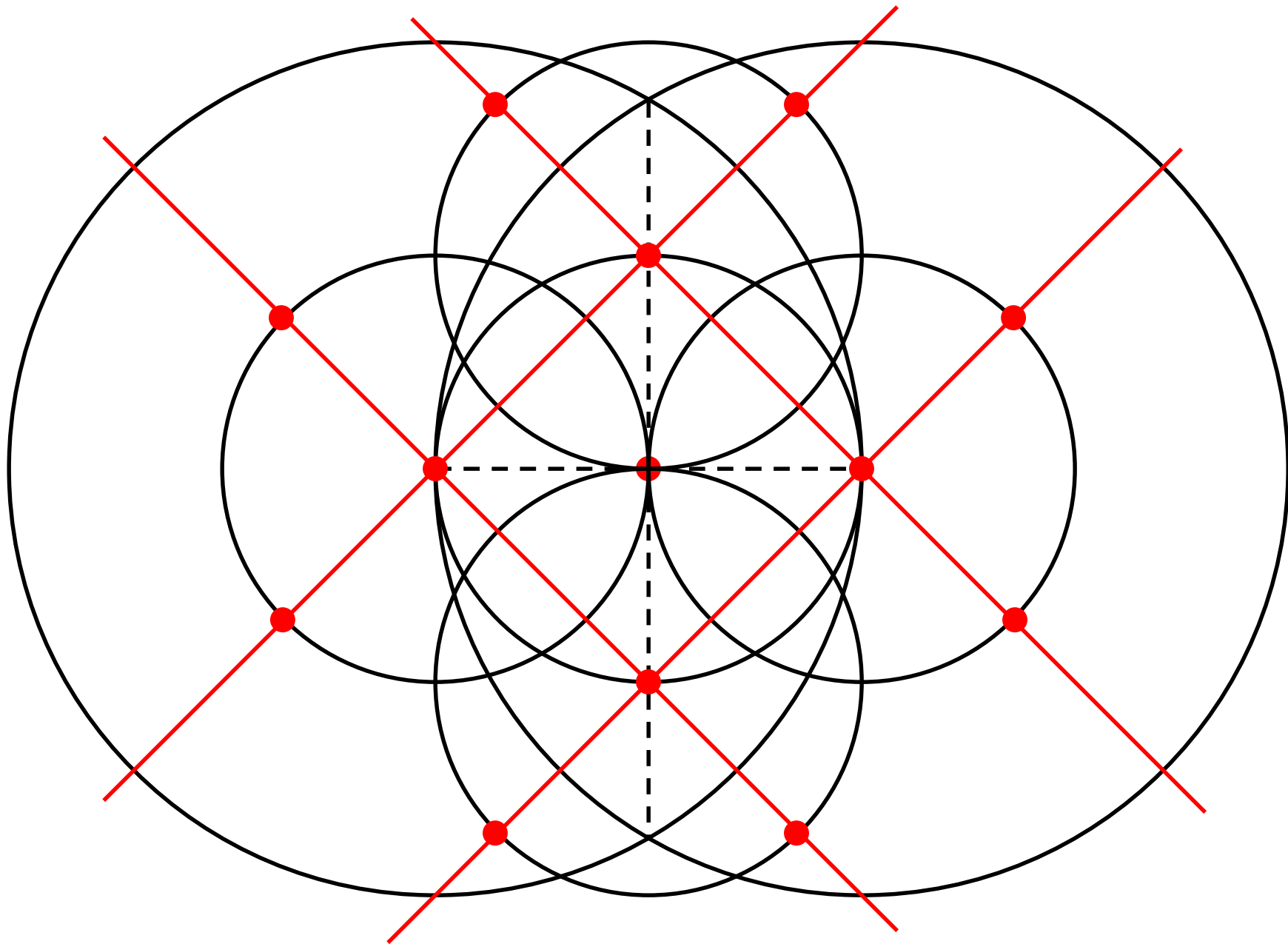


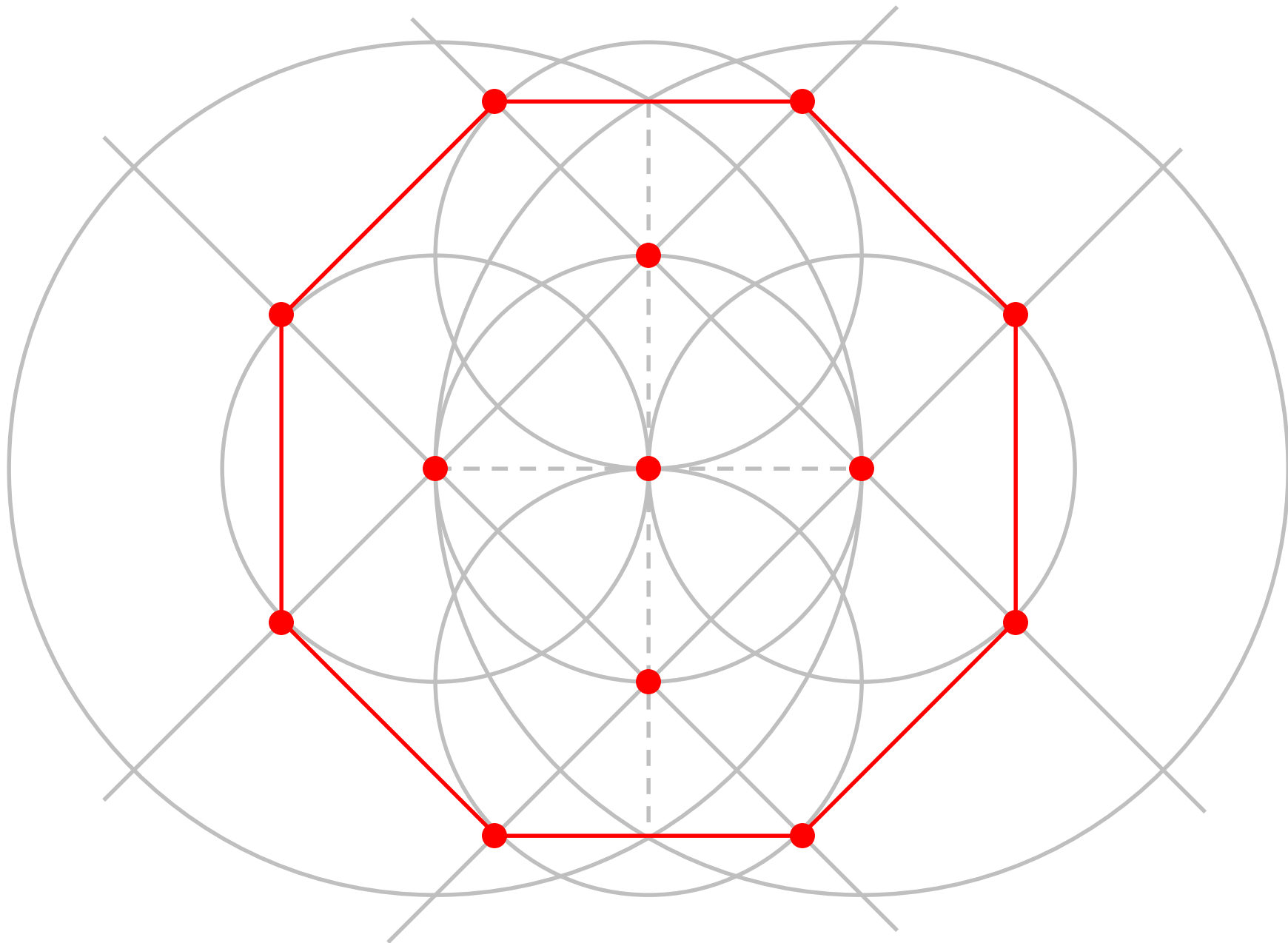








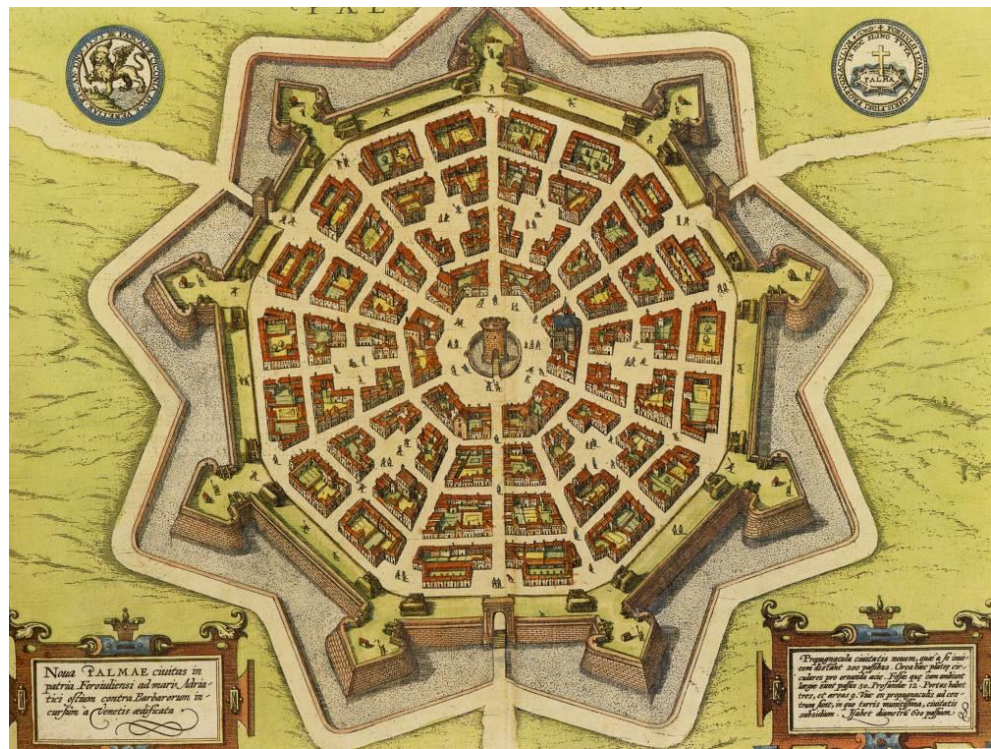




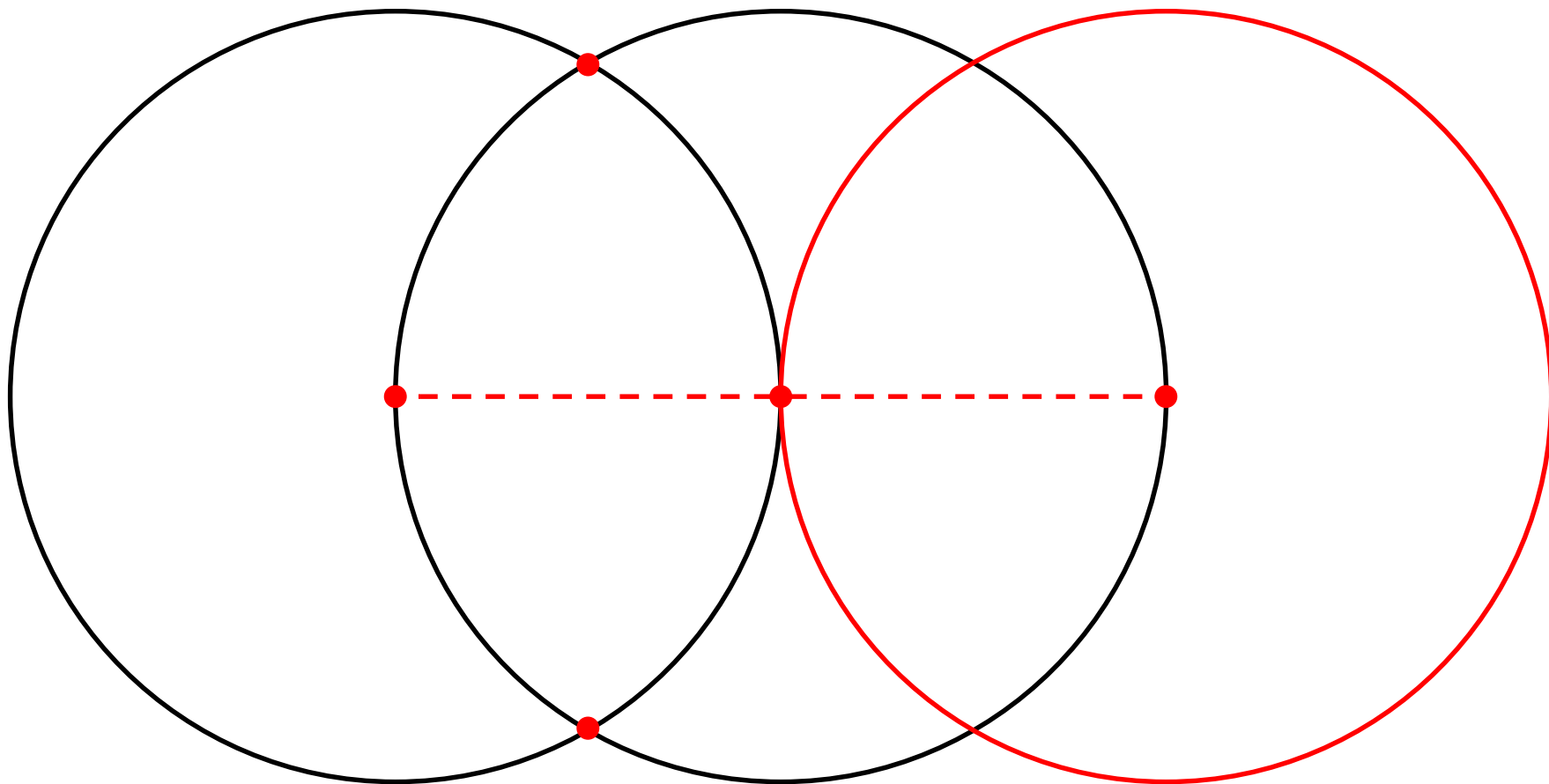
ENNEAD

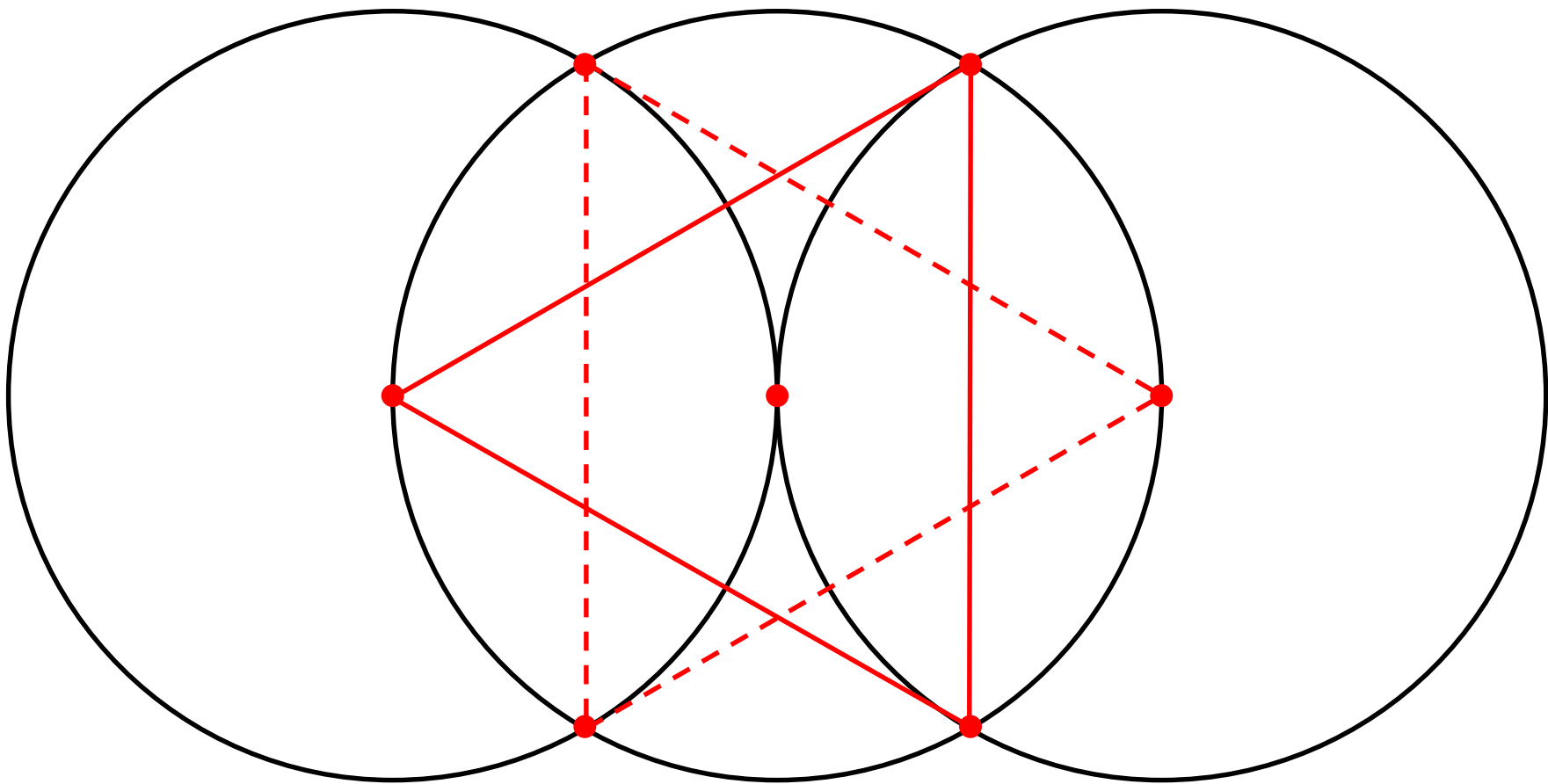
“9”



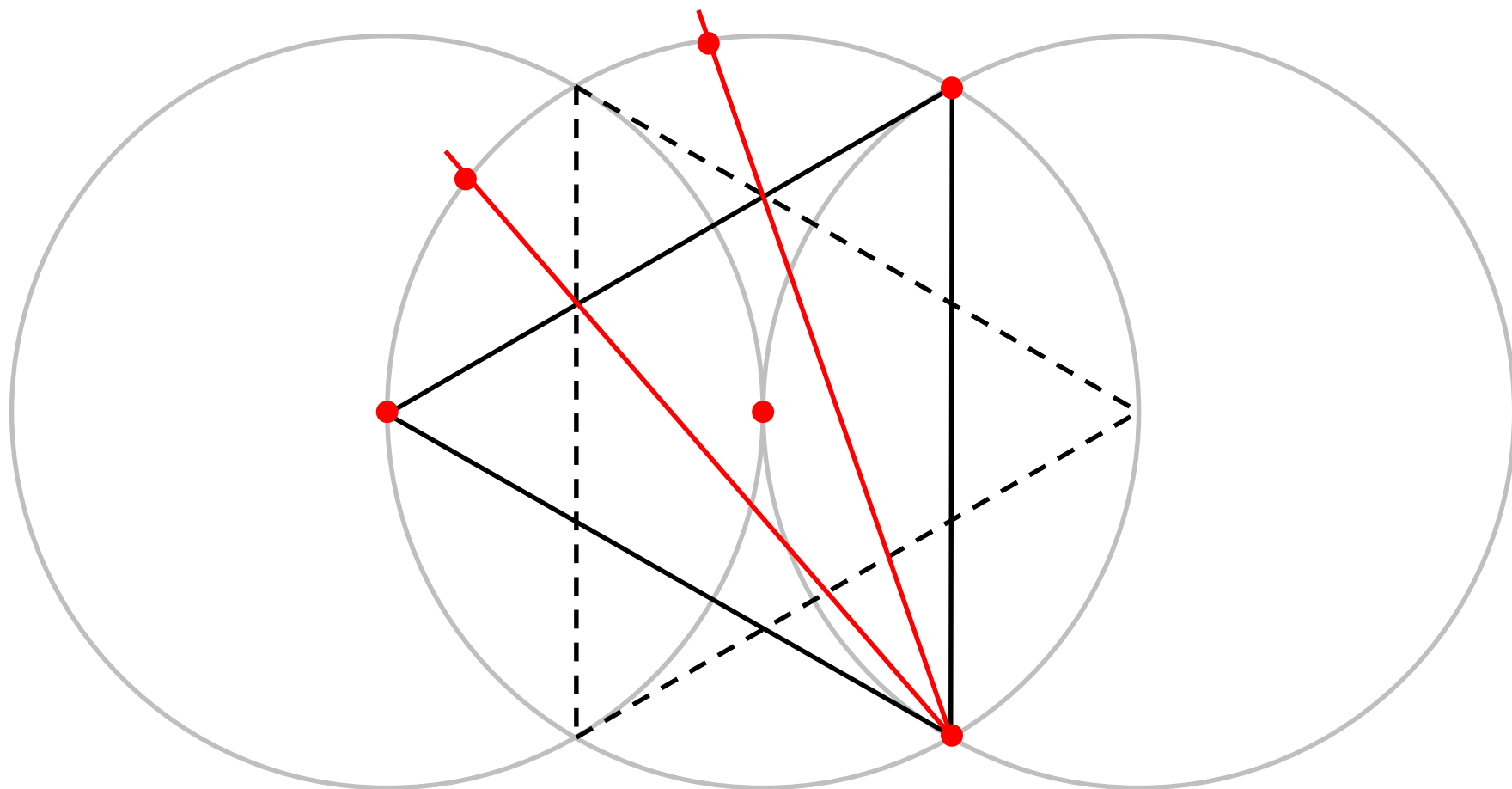


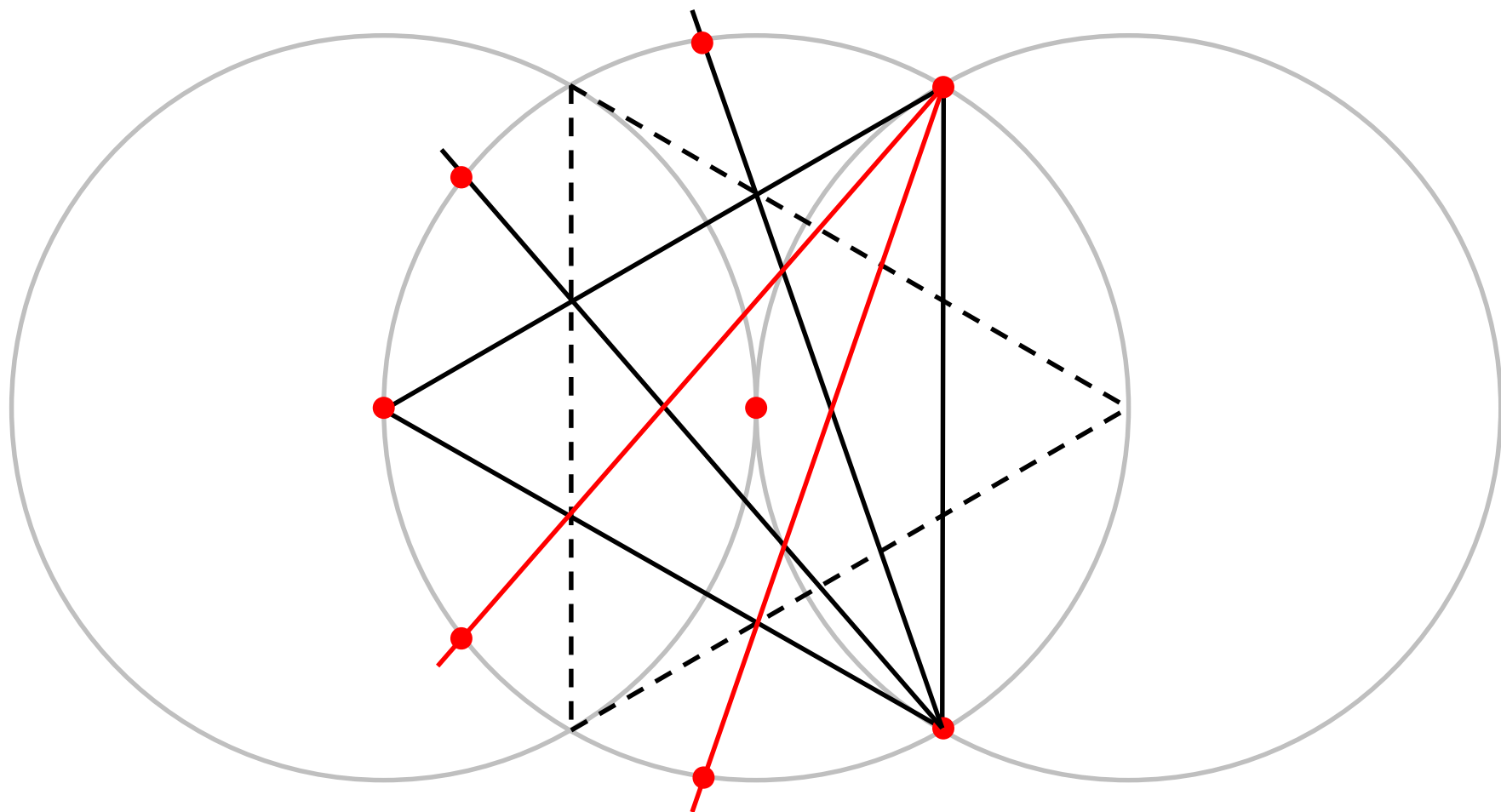
# How to Construct the Nonagon

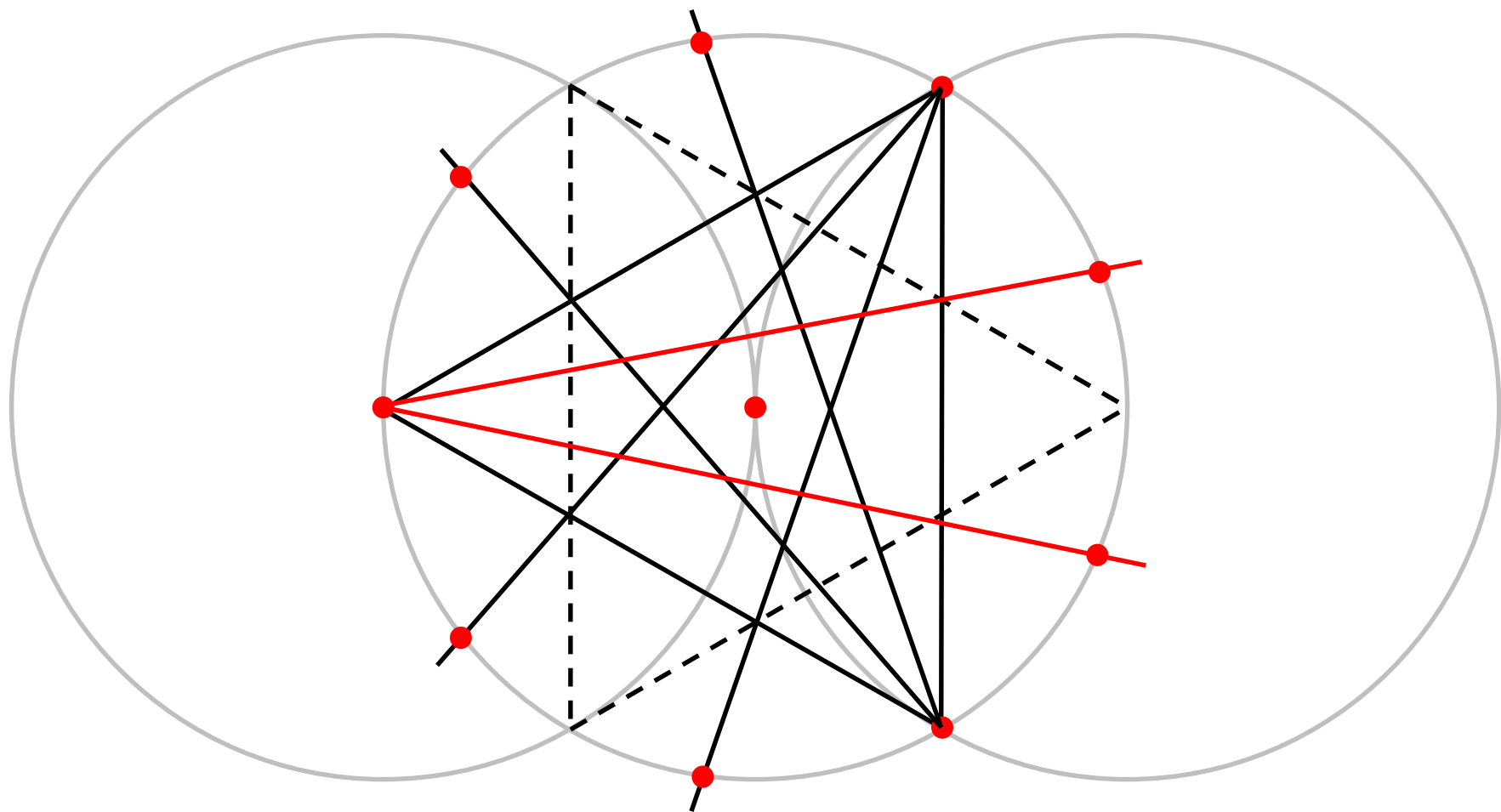




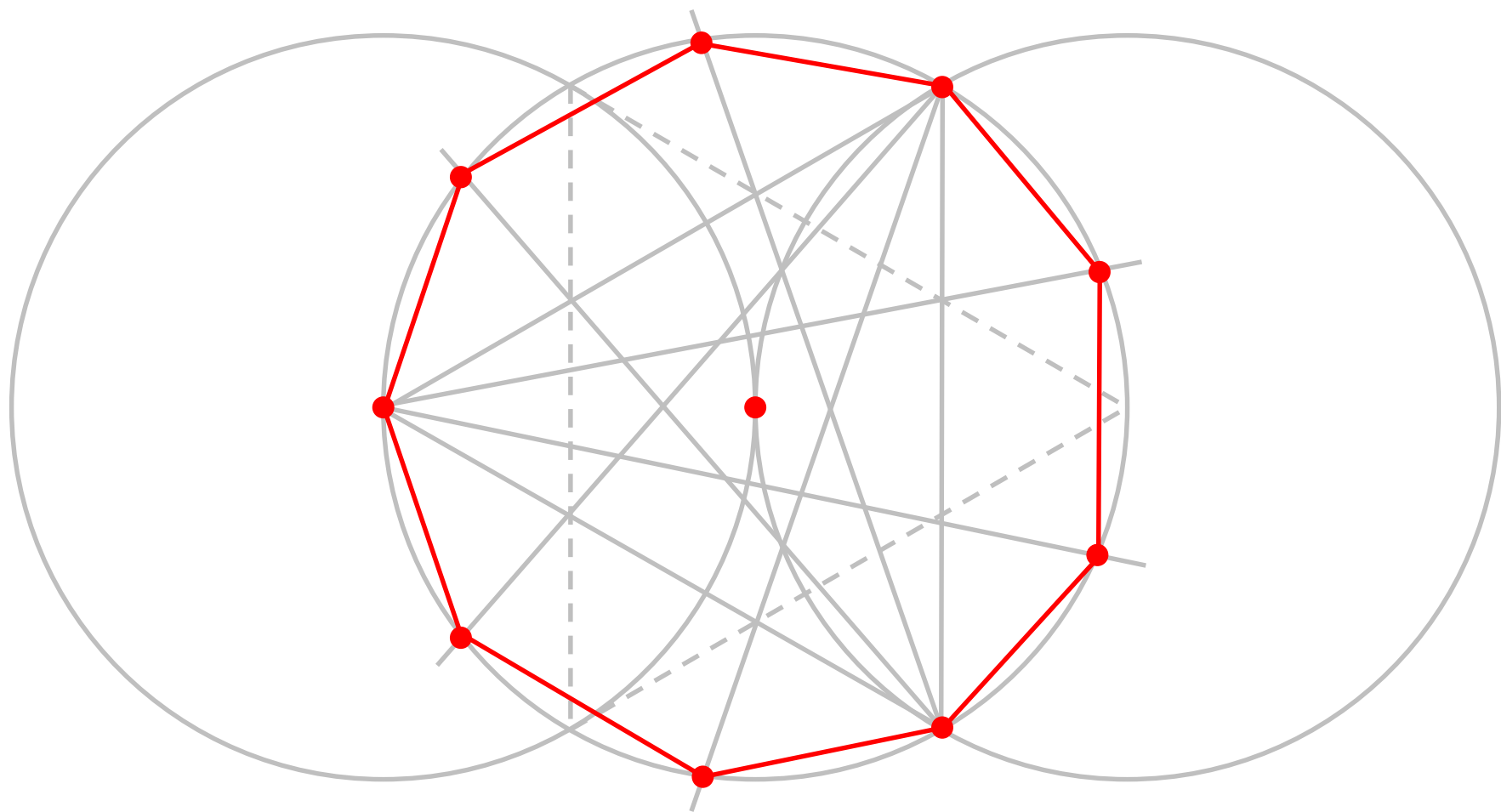






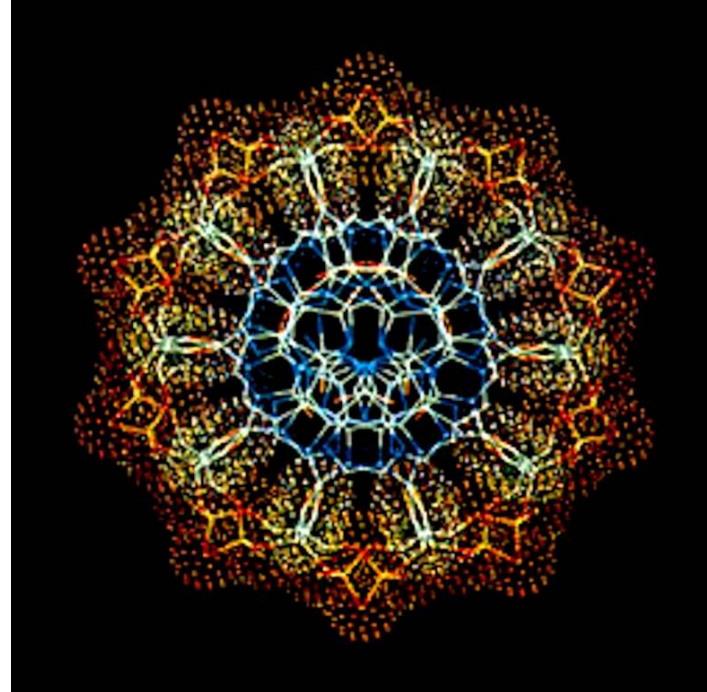
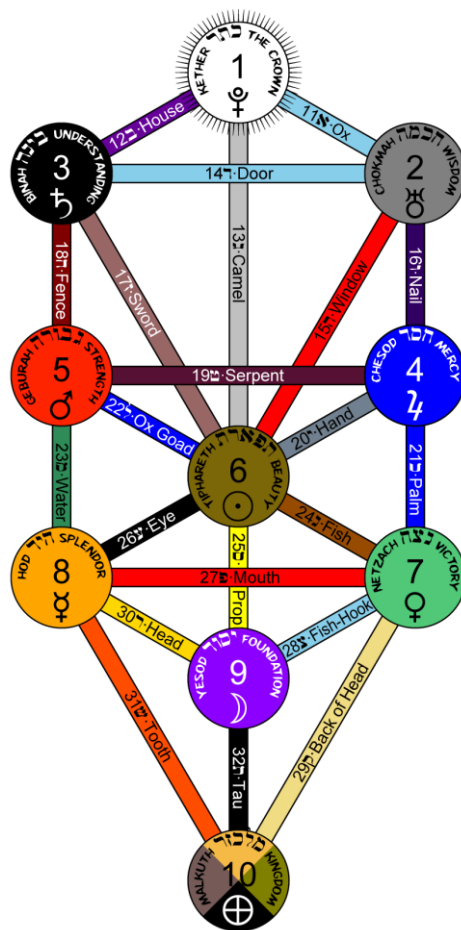
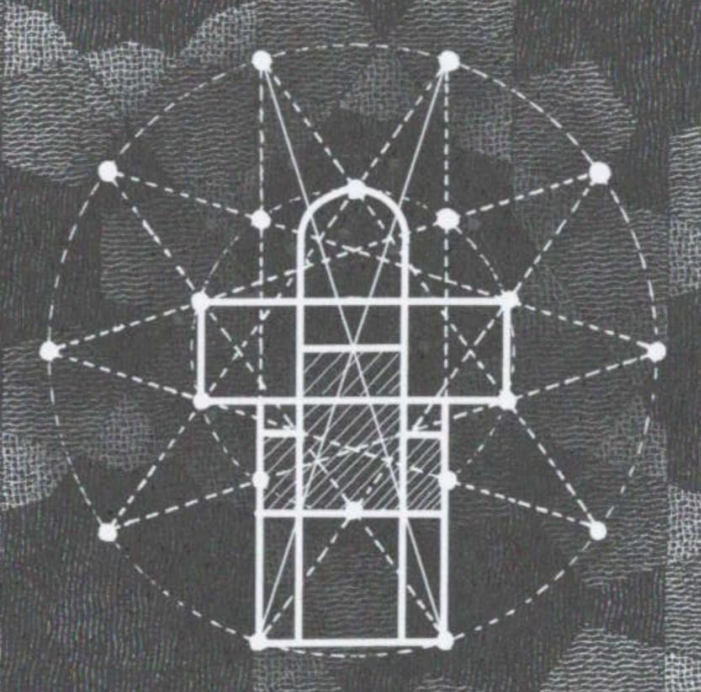






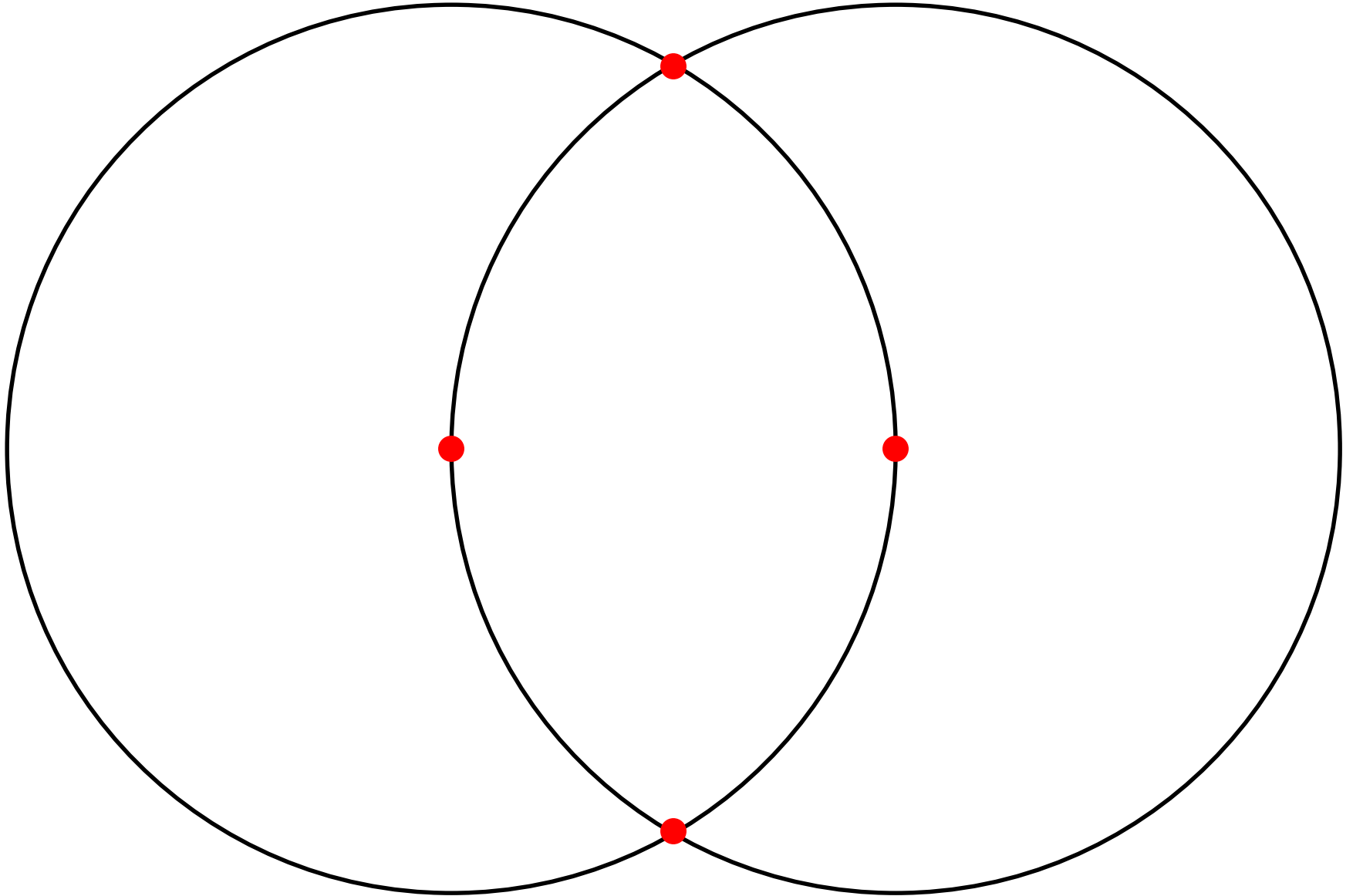
DECAD

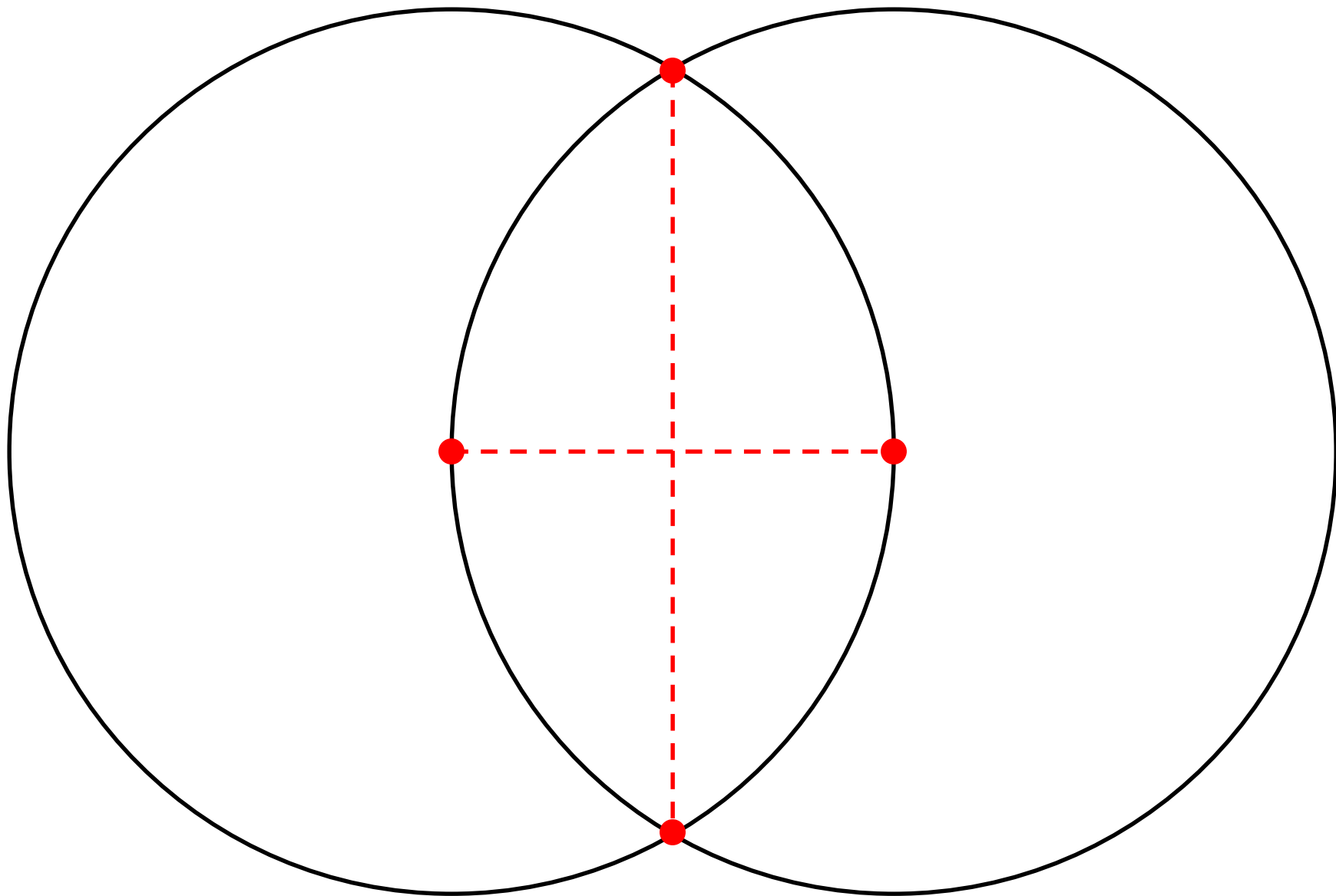
“10”

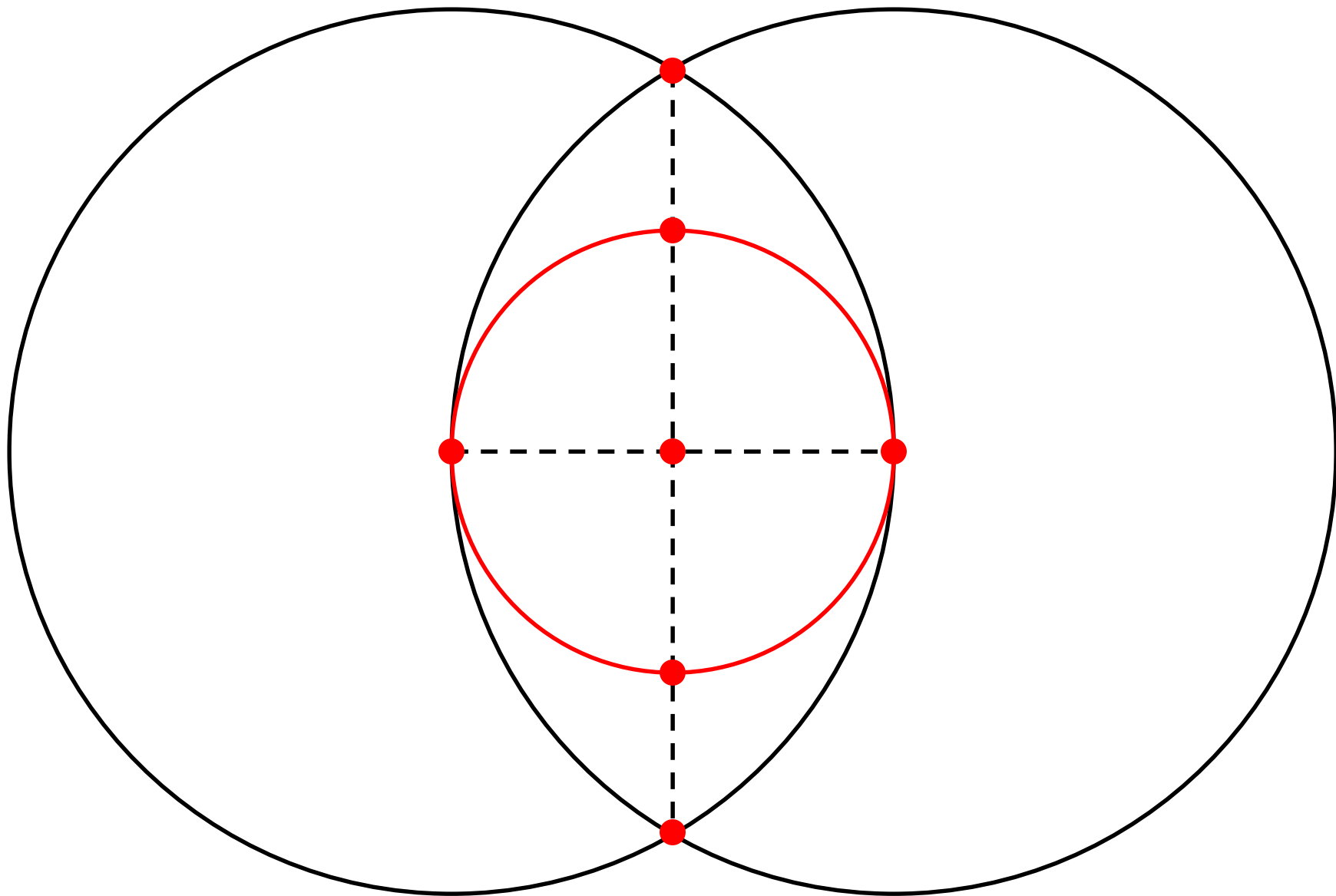




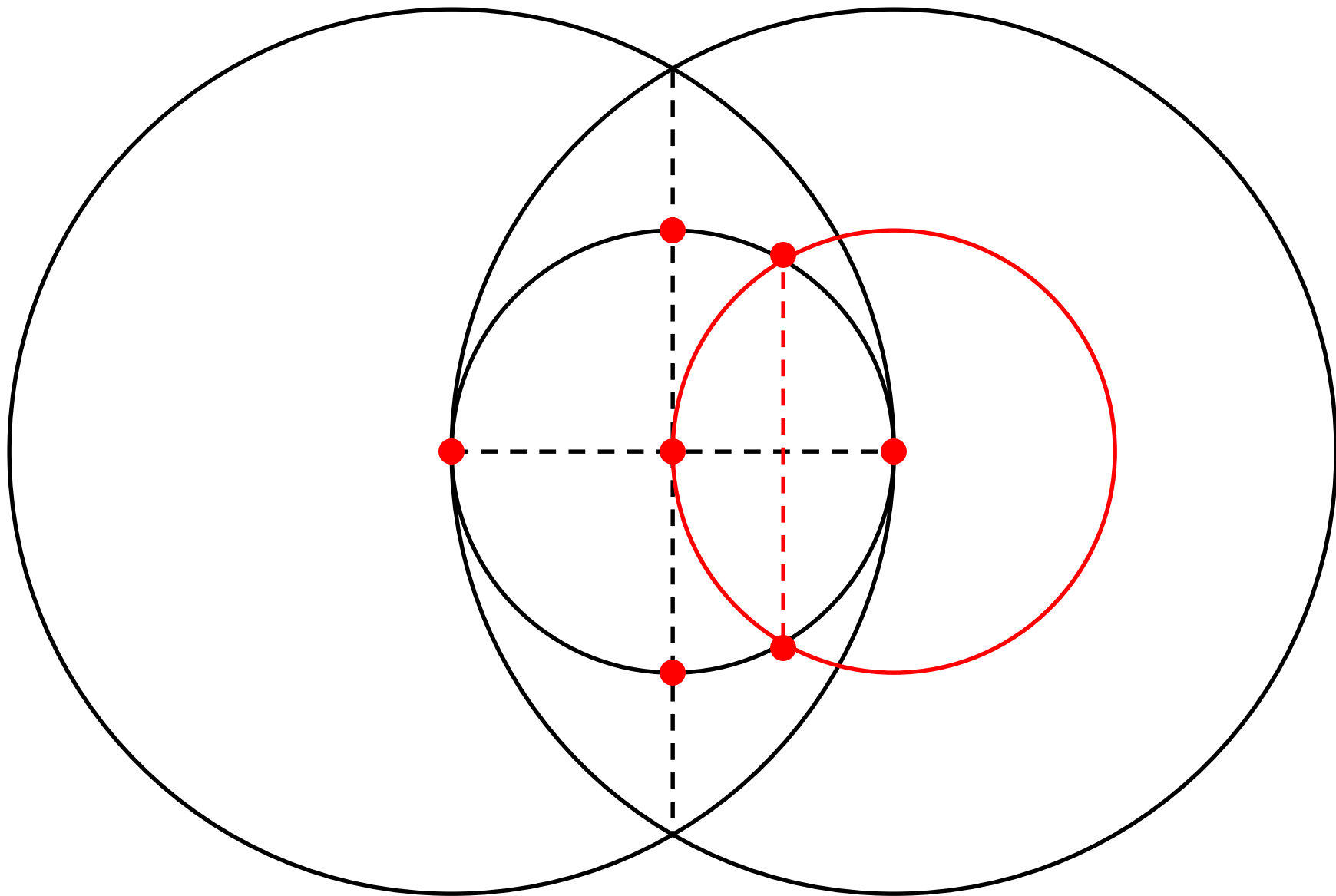
# How to Construct the Decagon

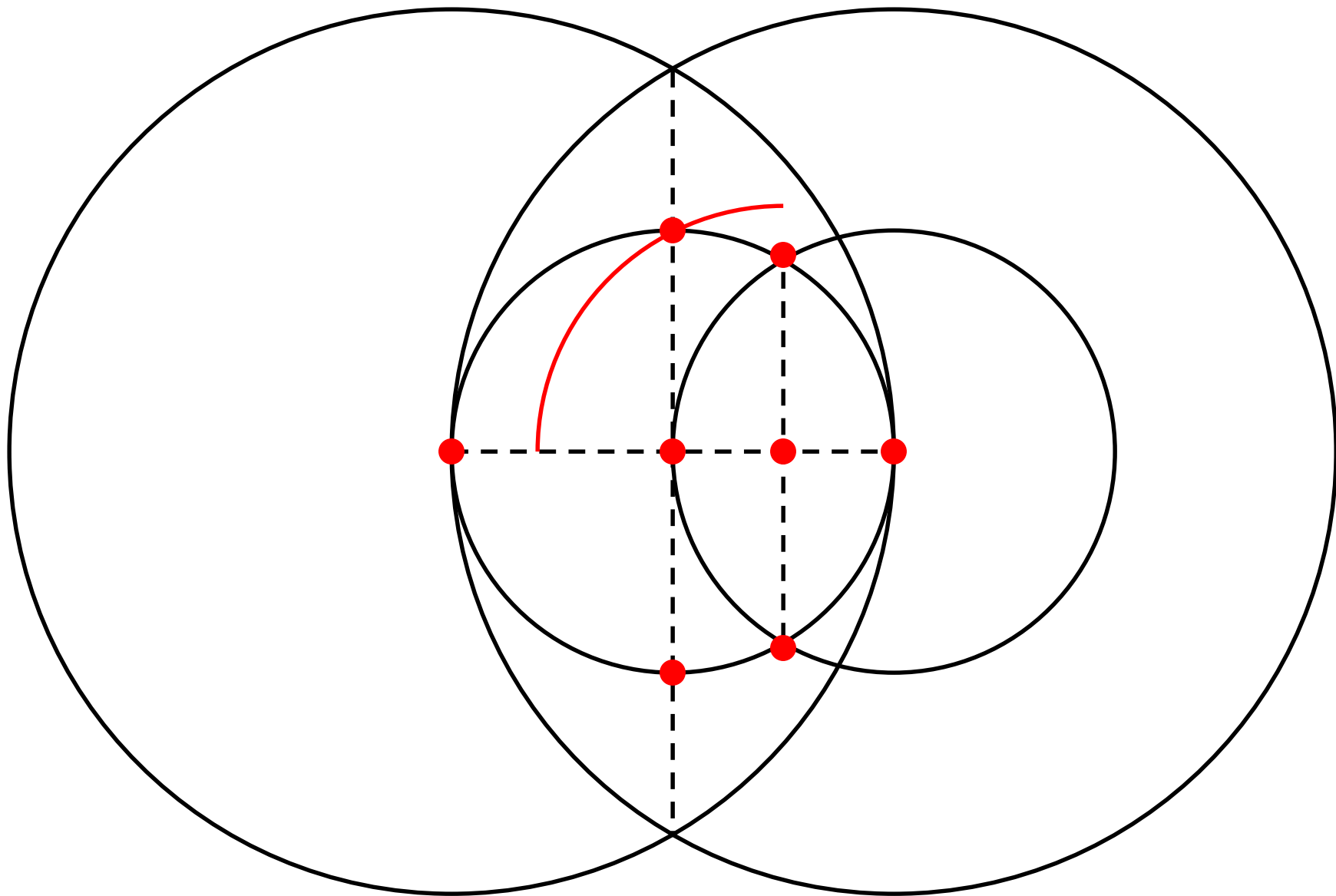


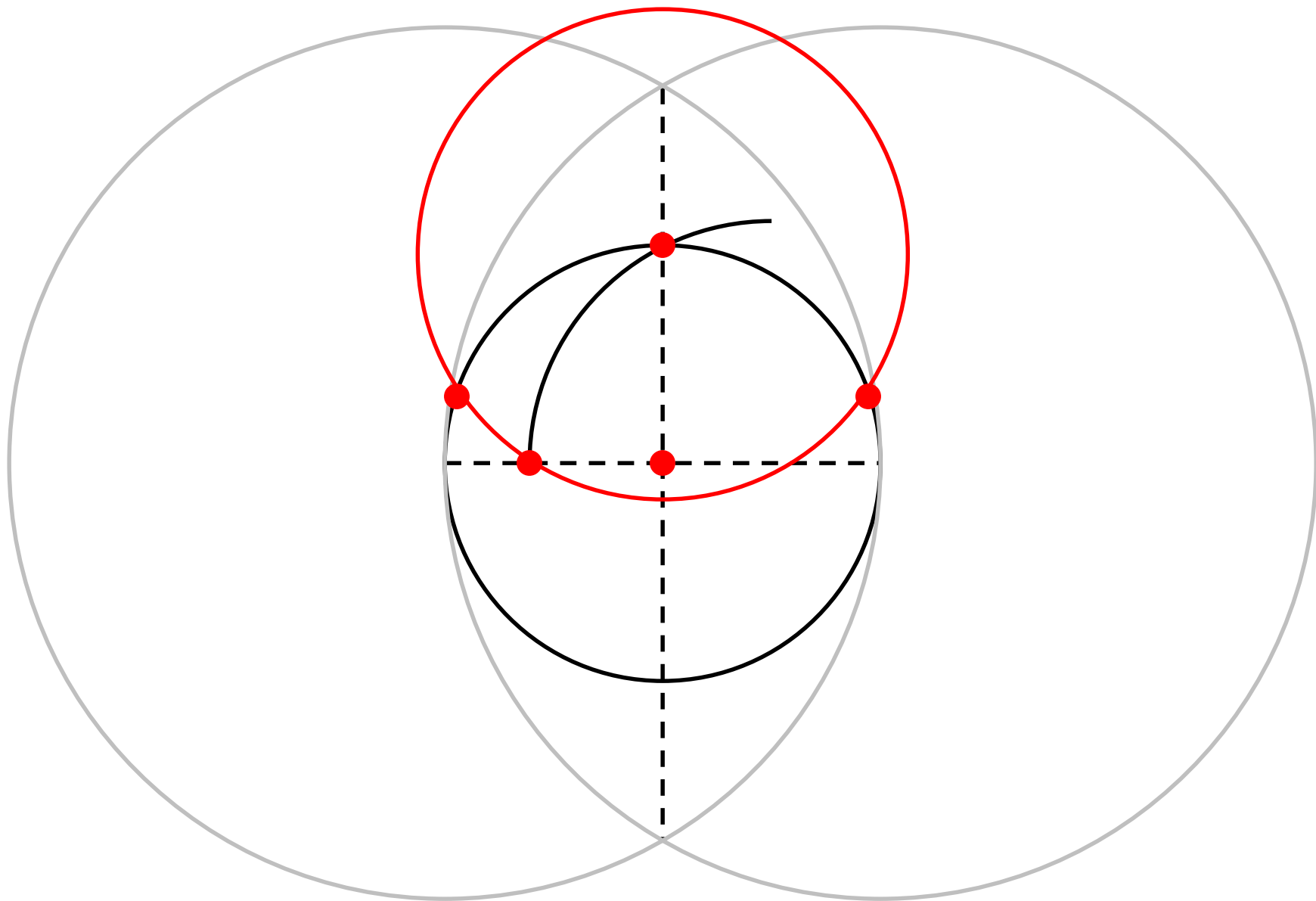




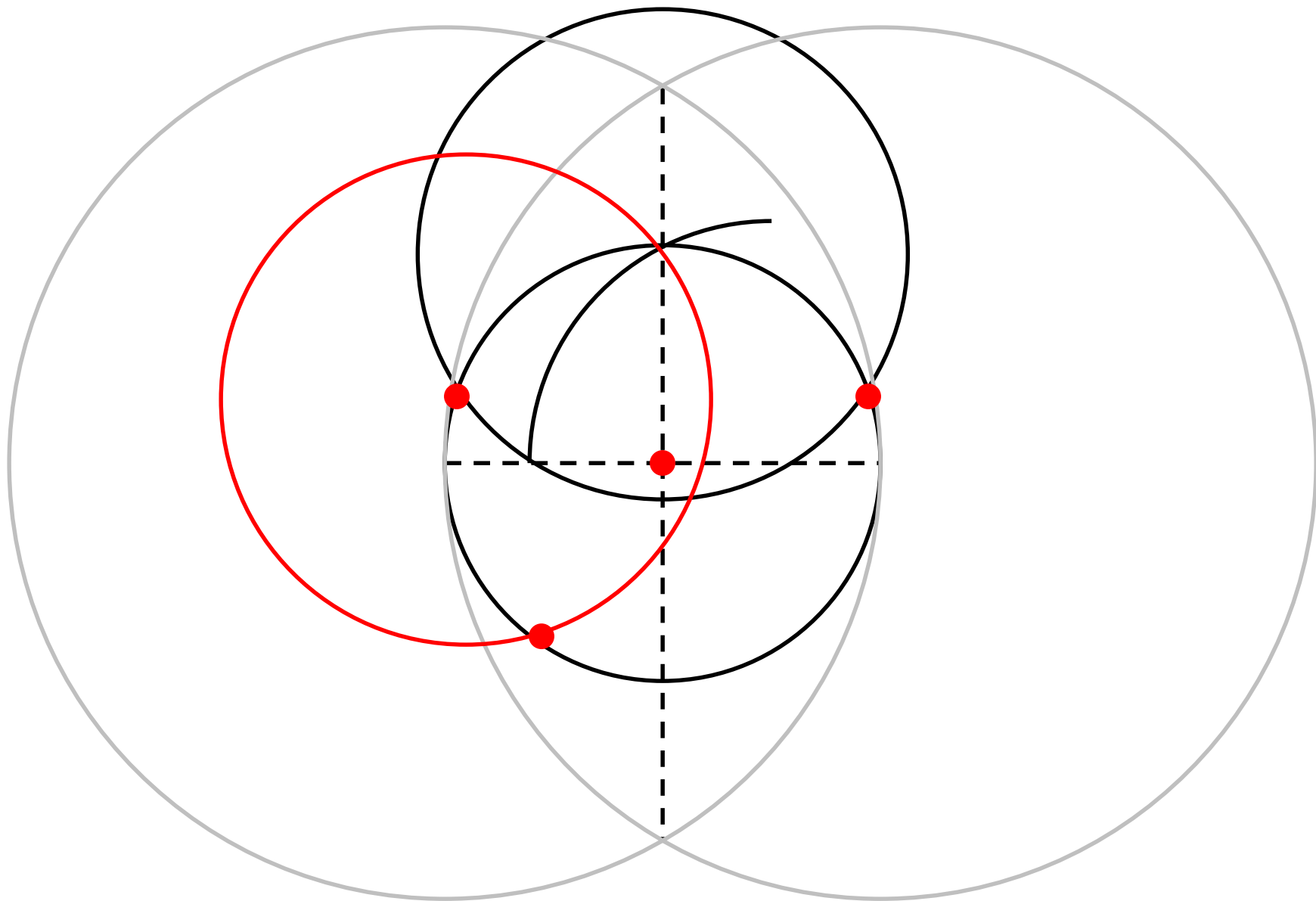


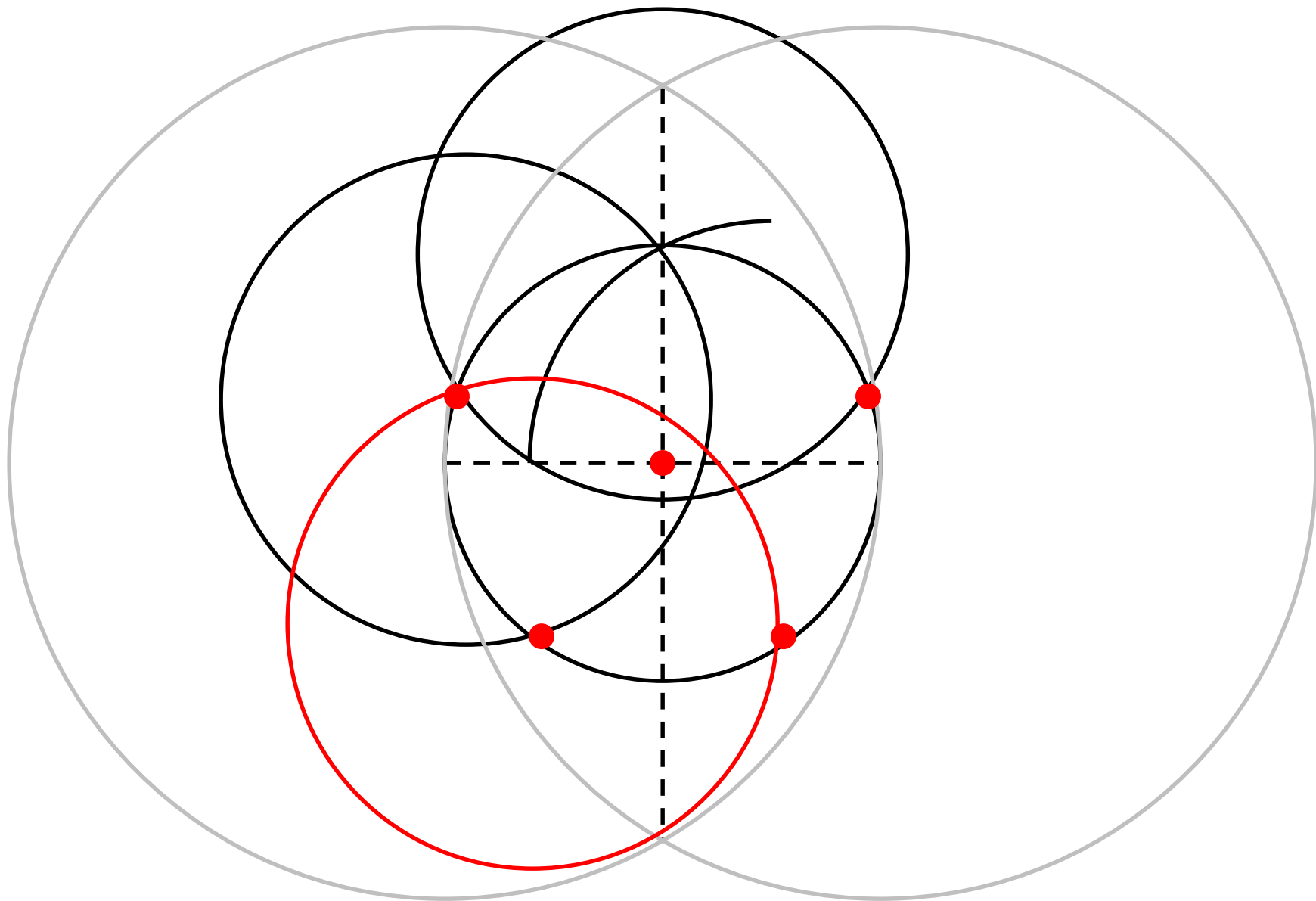


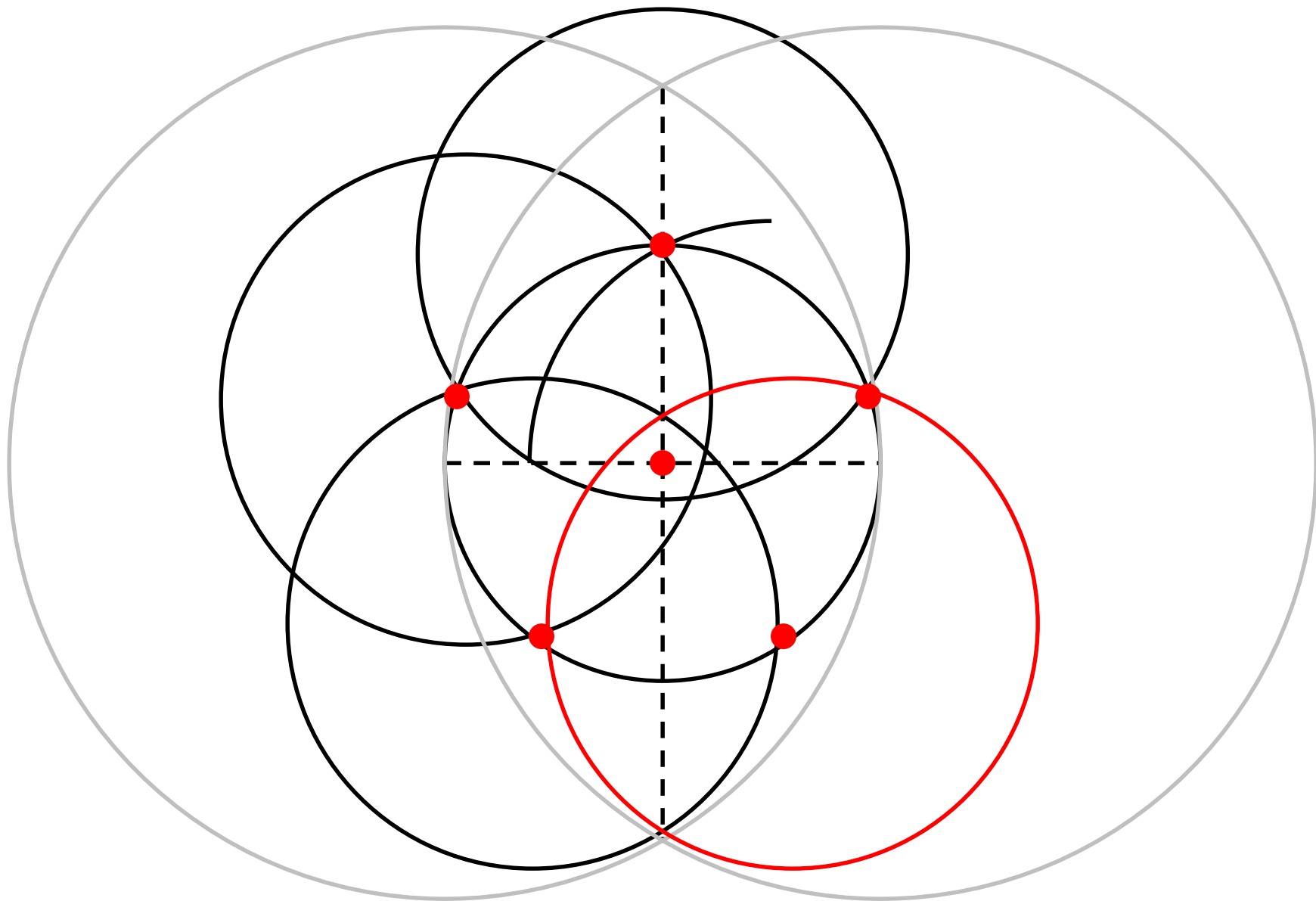




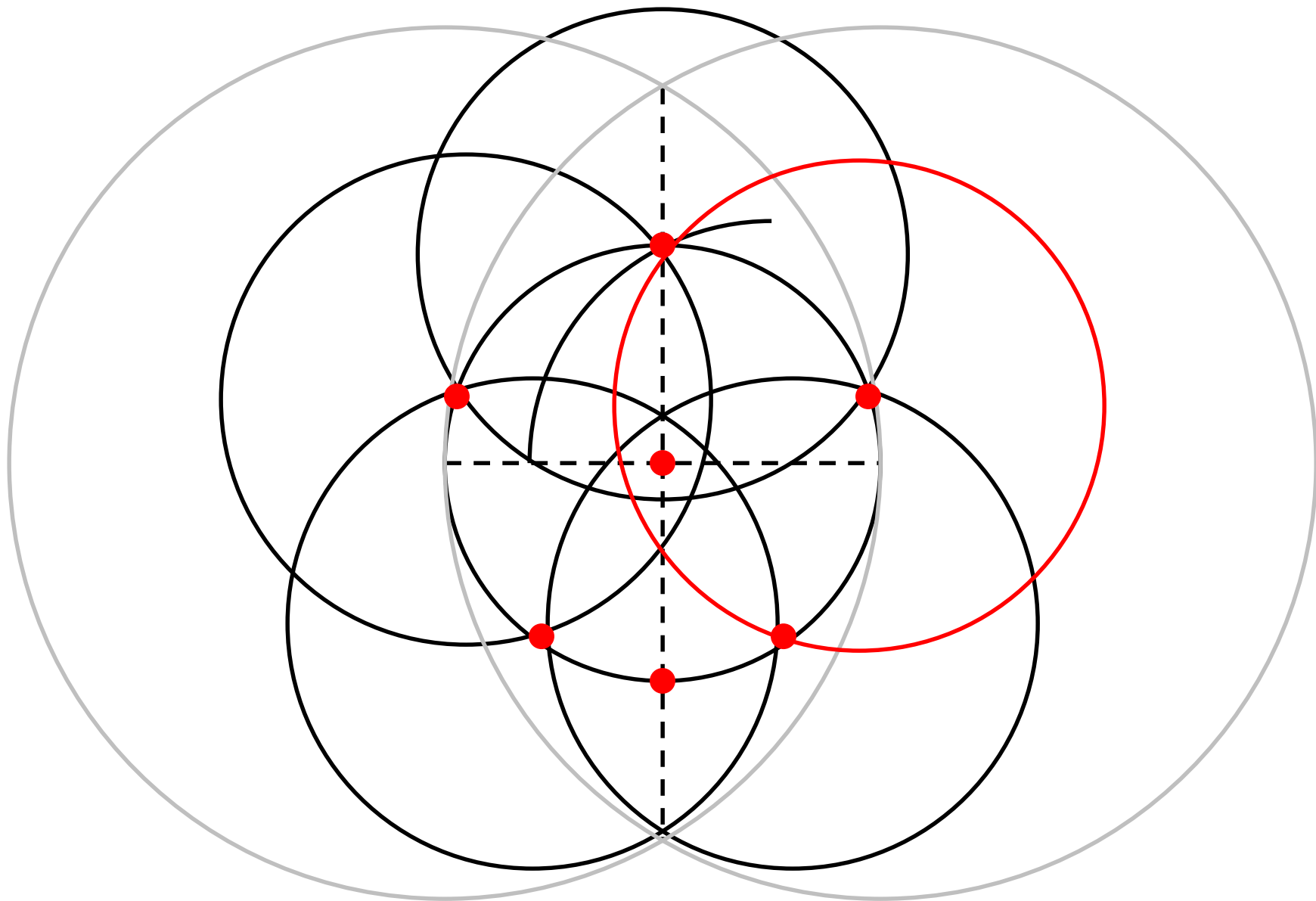


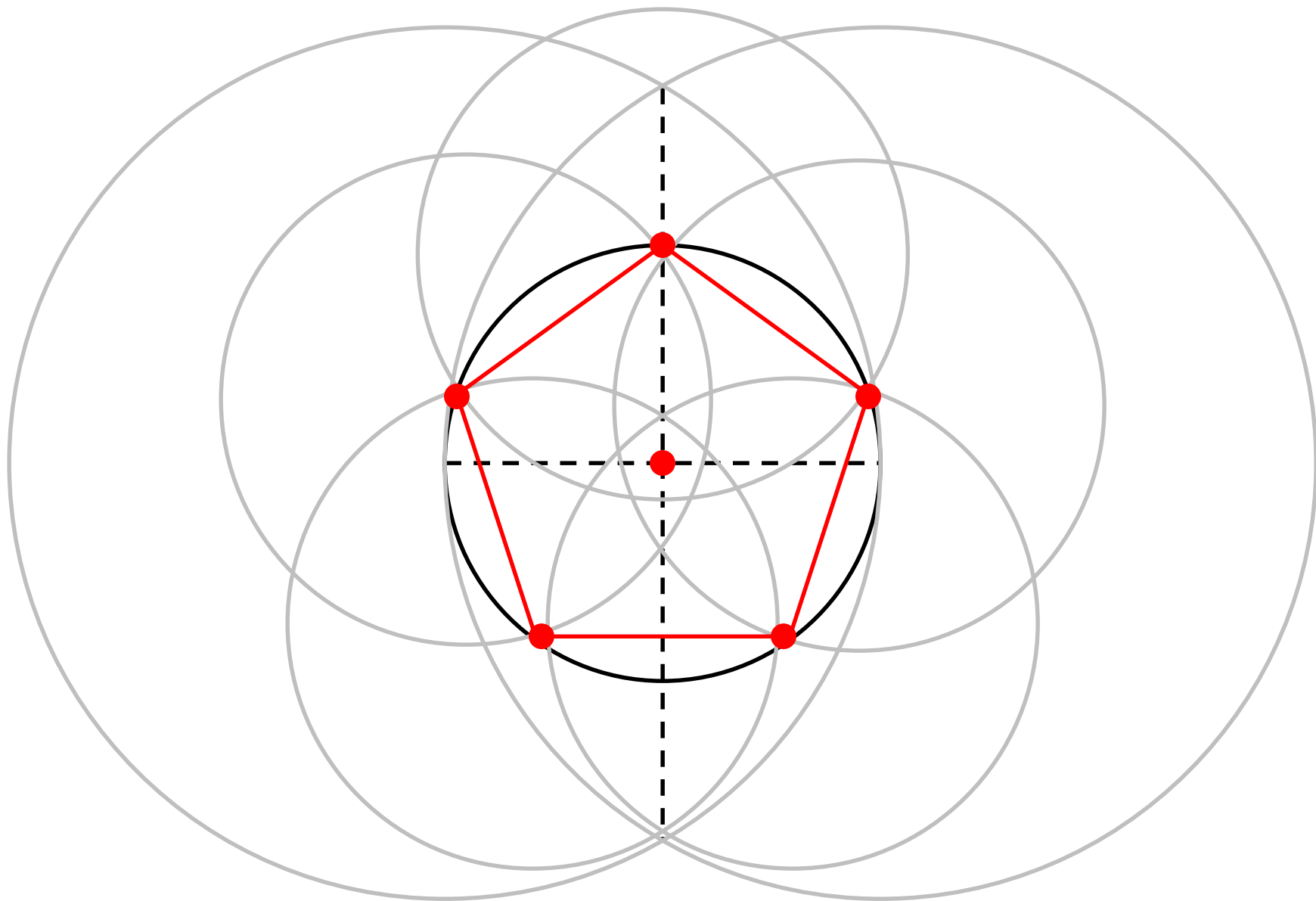


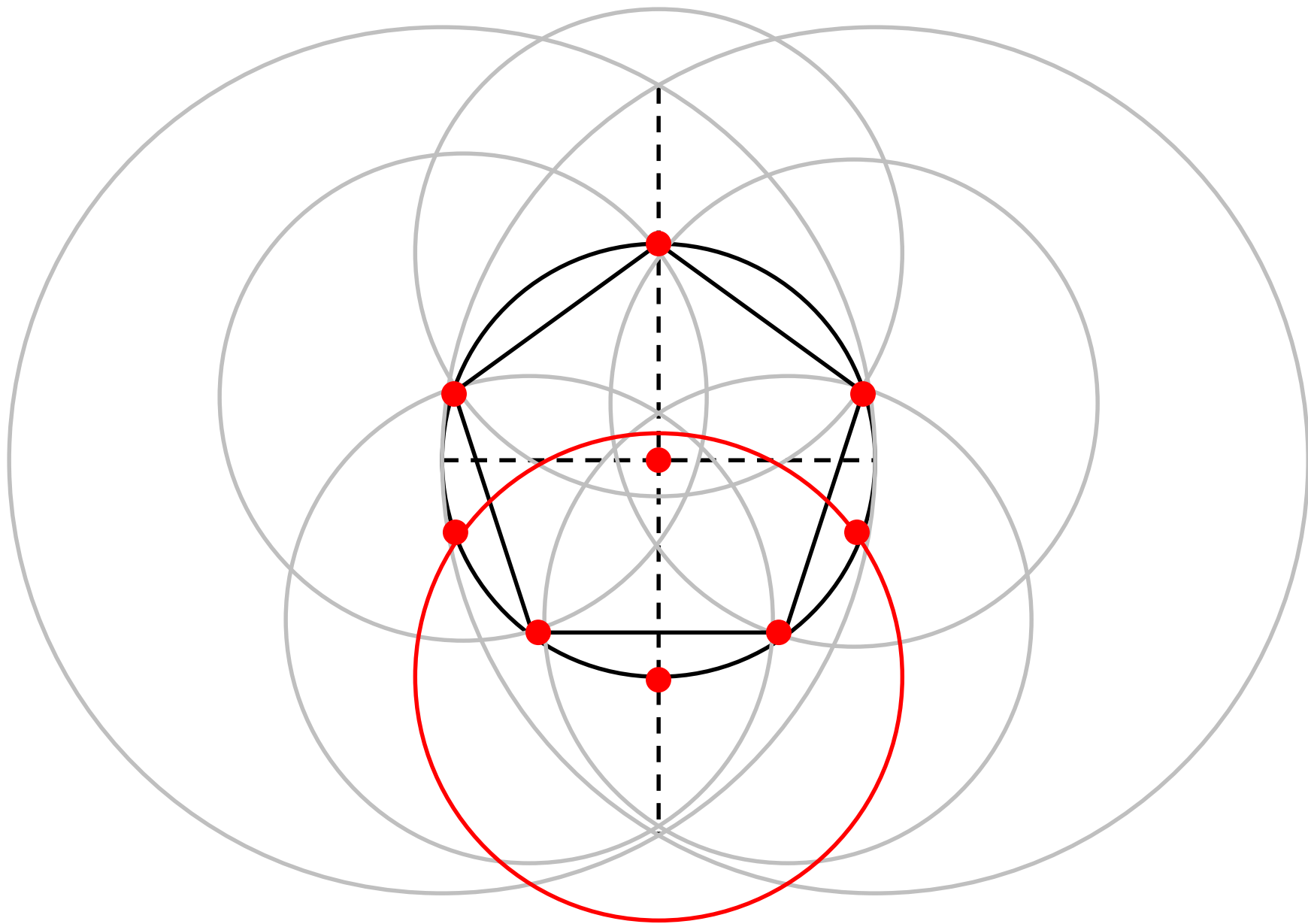




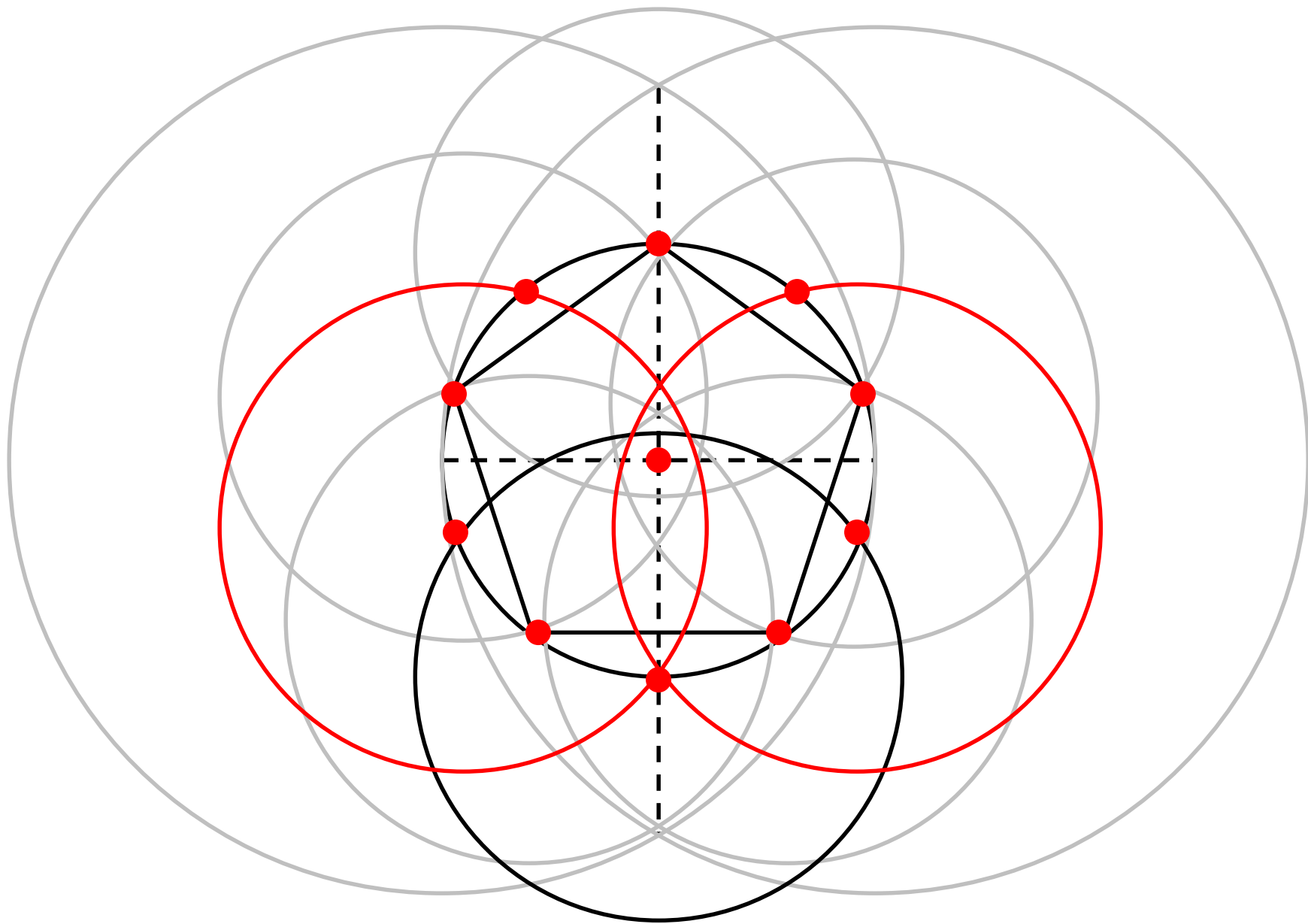


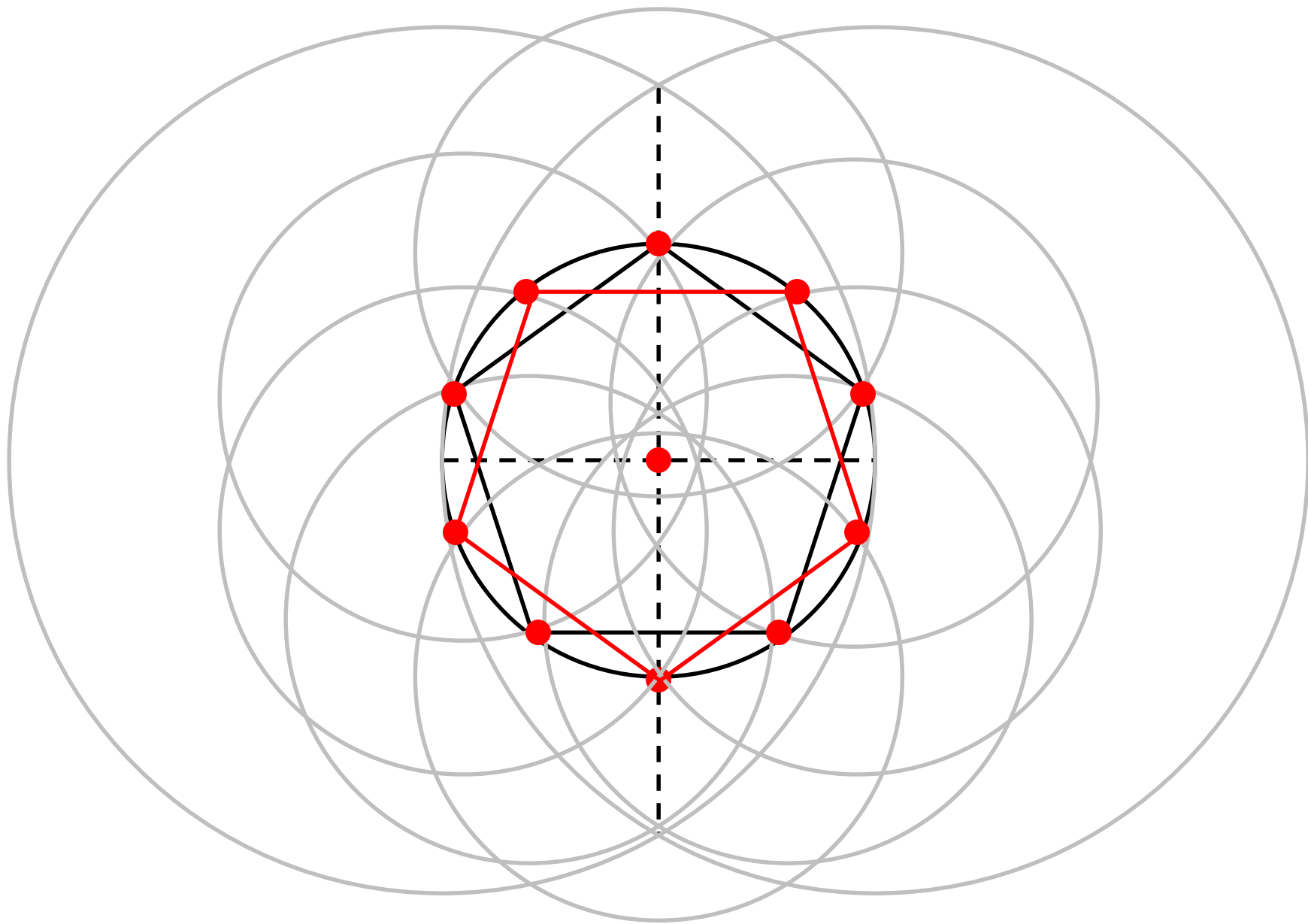








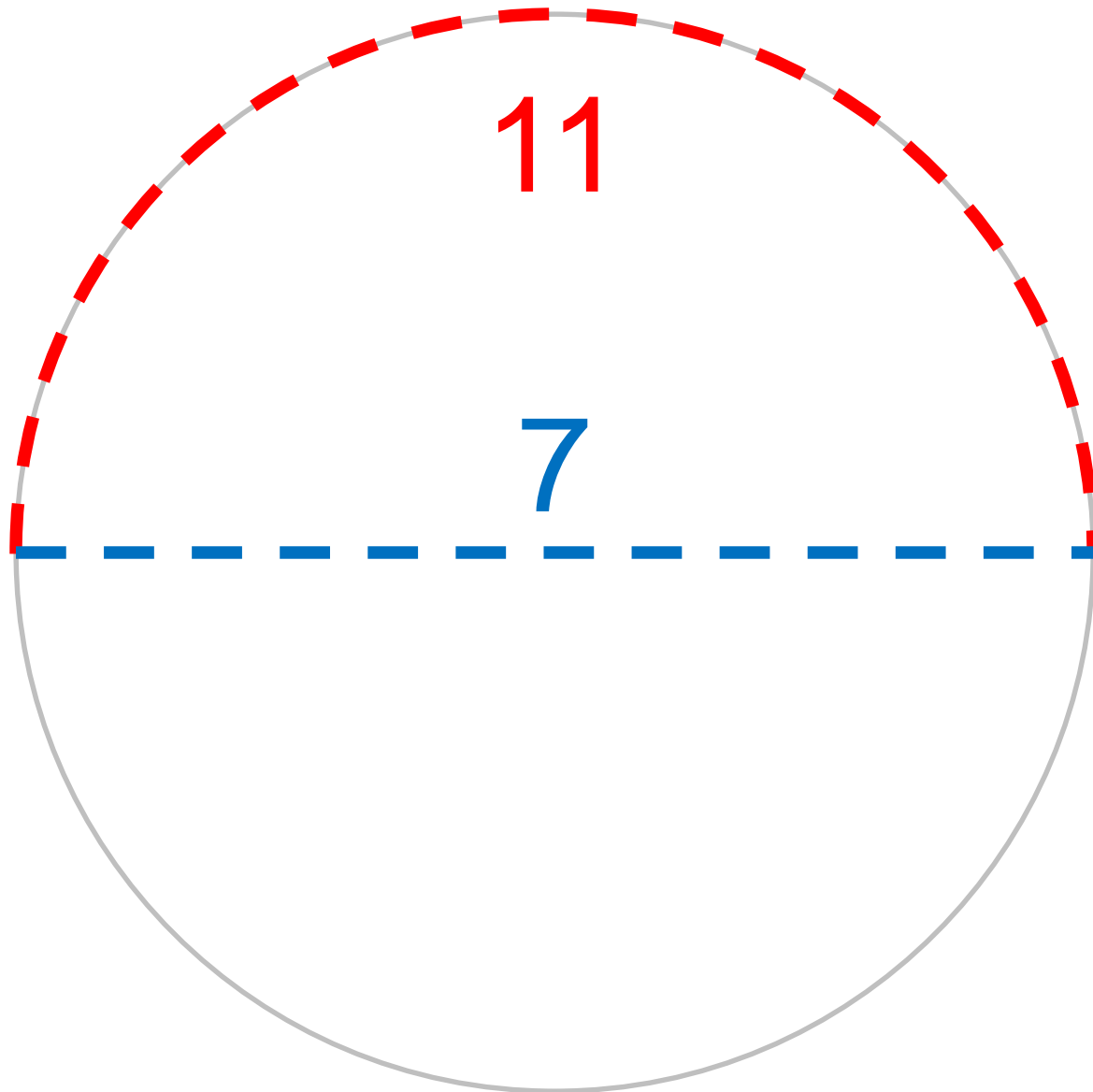


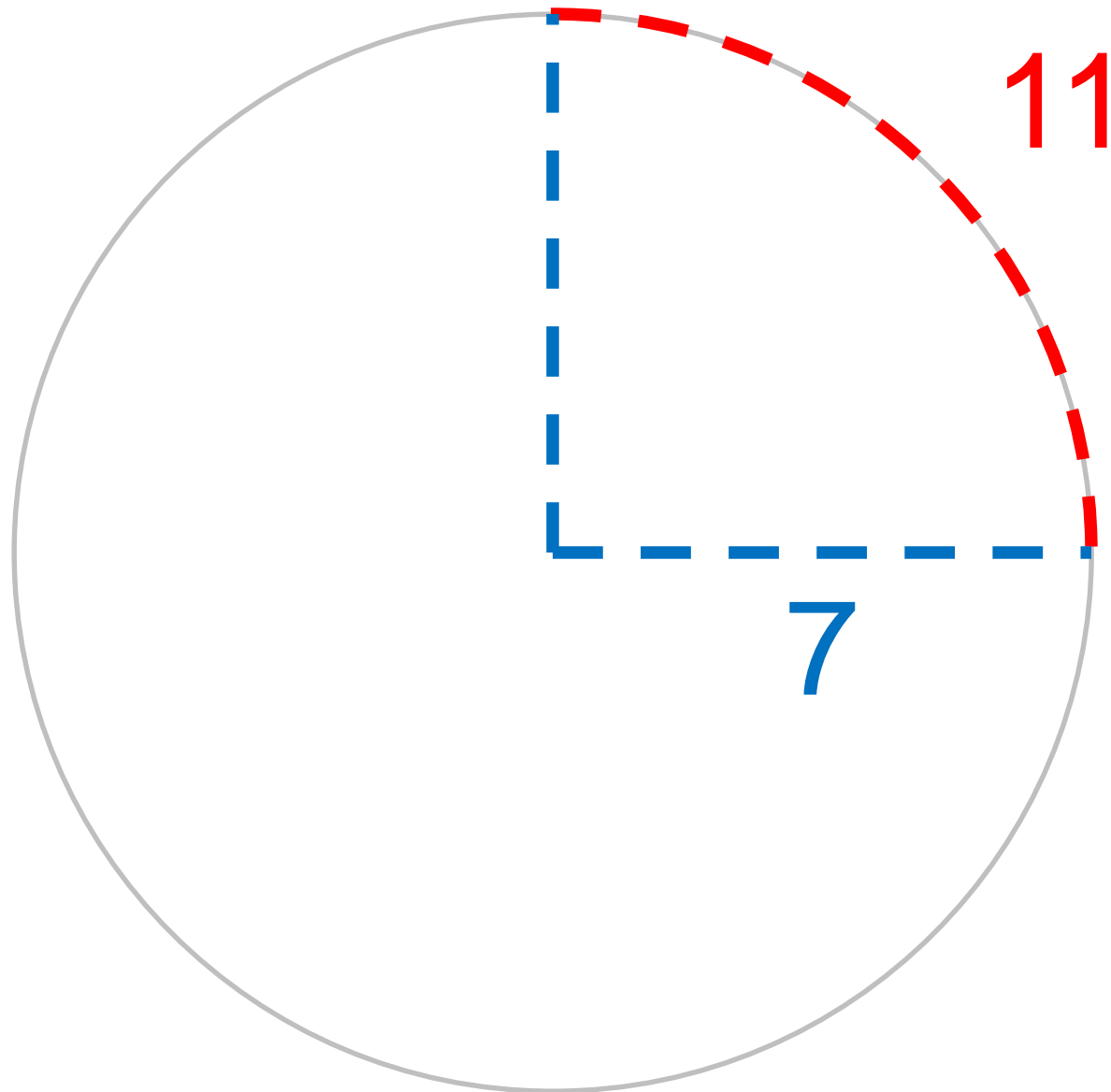


HENDECAD

“11”



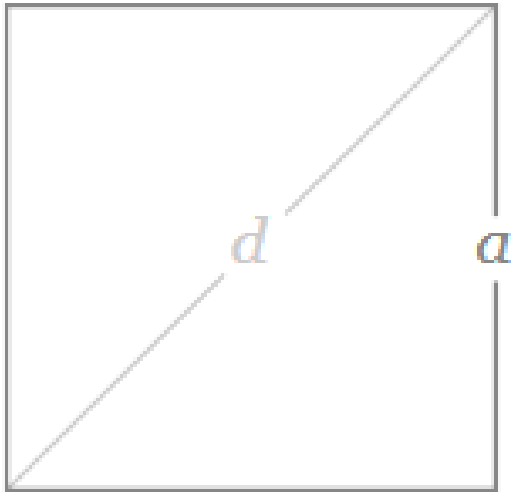




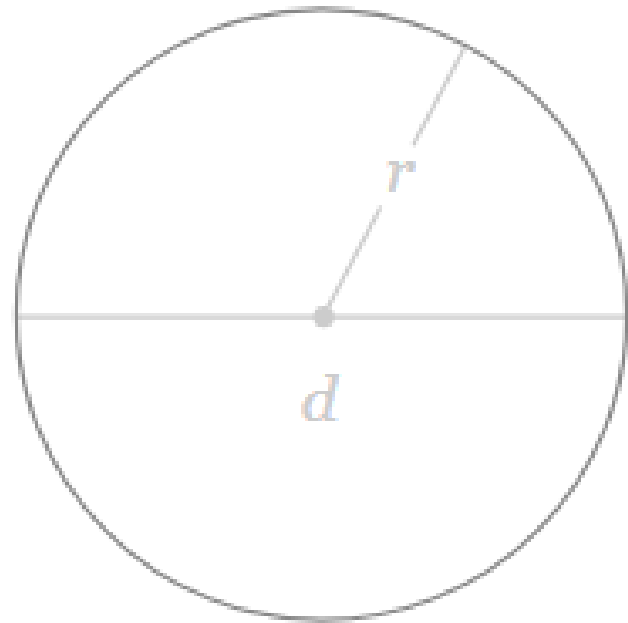
# Squaring the Circle

$$4a = P = 2\pi r$$

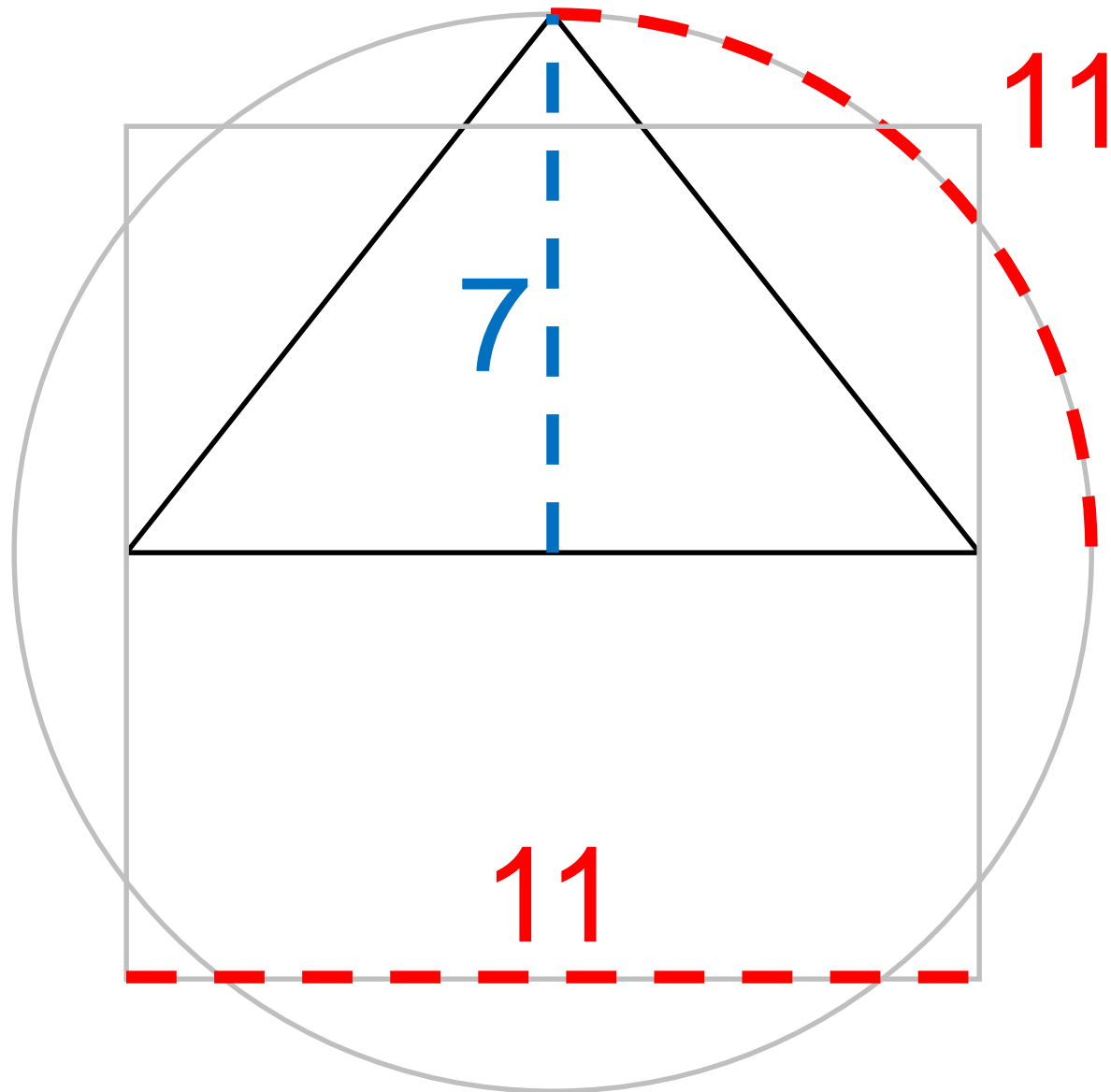
$$P = 4a$$



$$C = 2\pi r$$

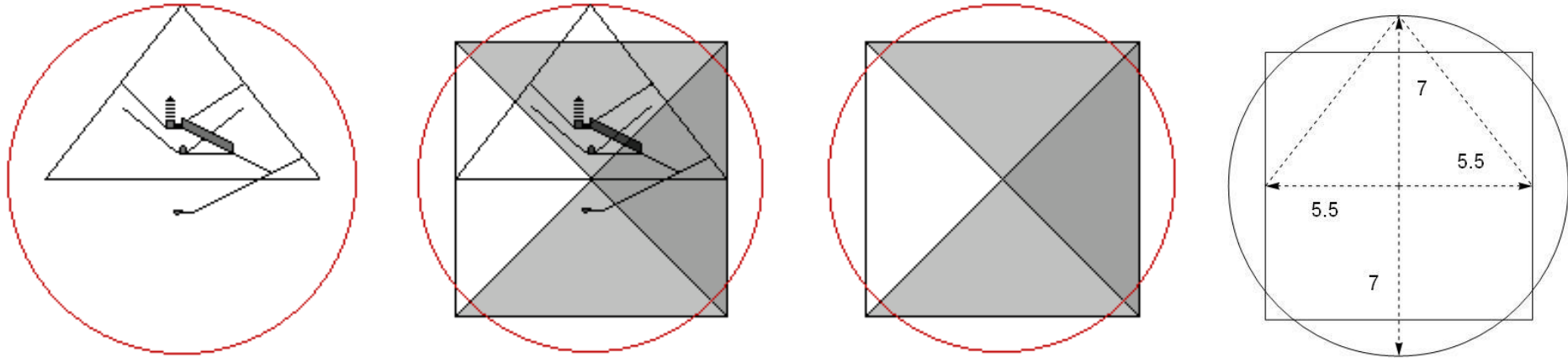




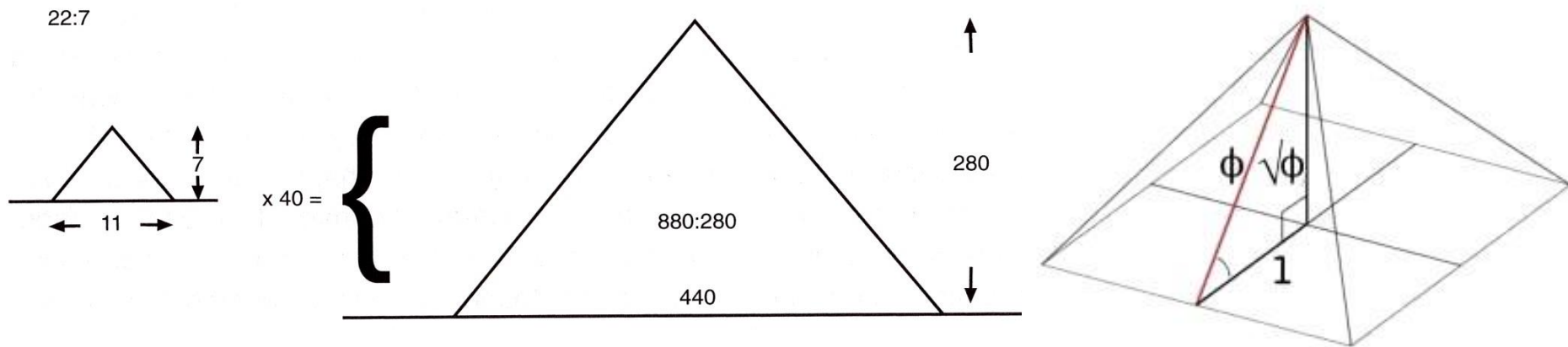




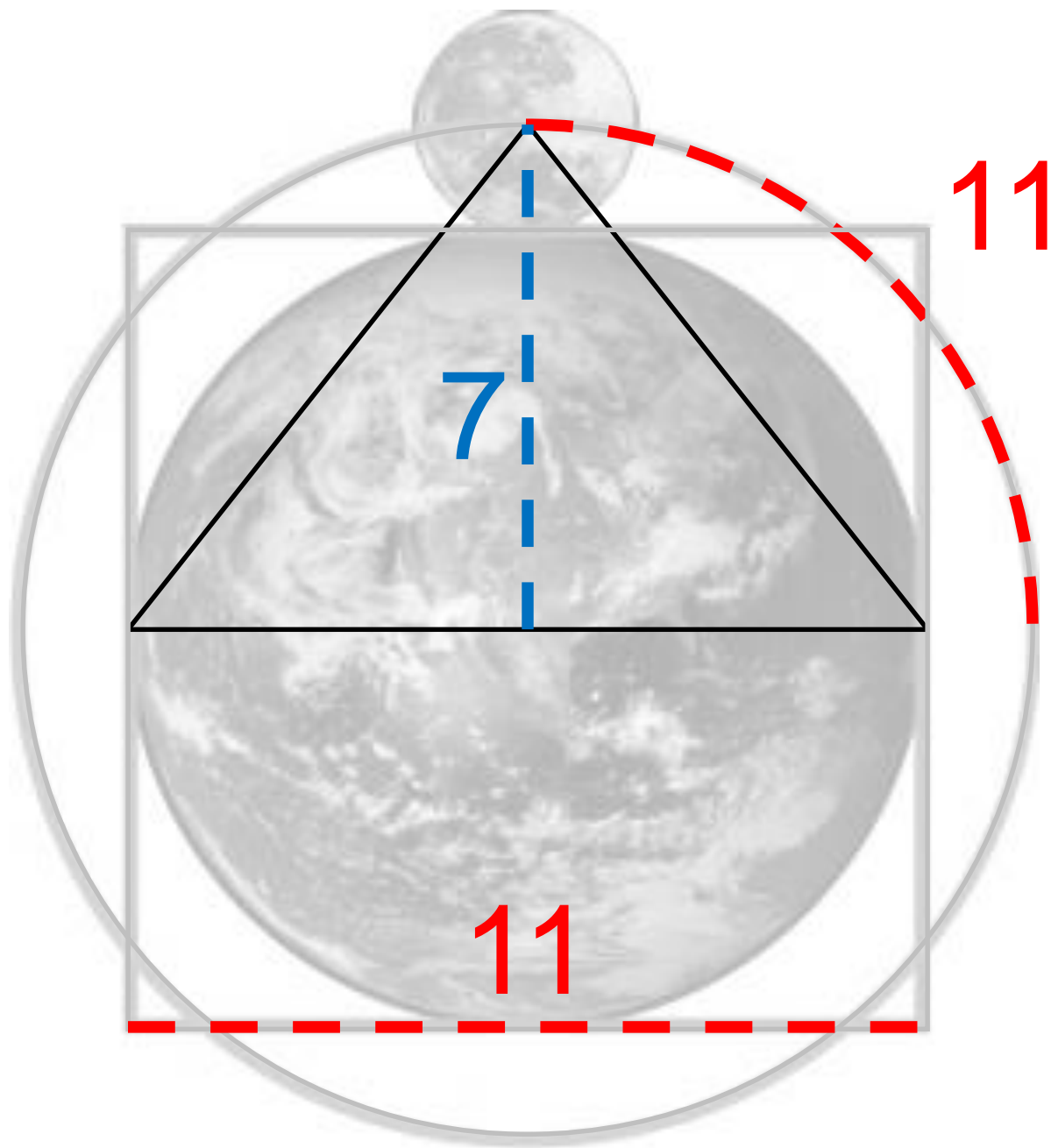
# Great Pyramid - Squaring the Circle

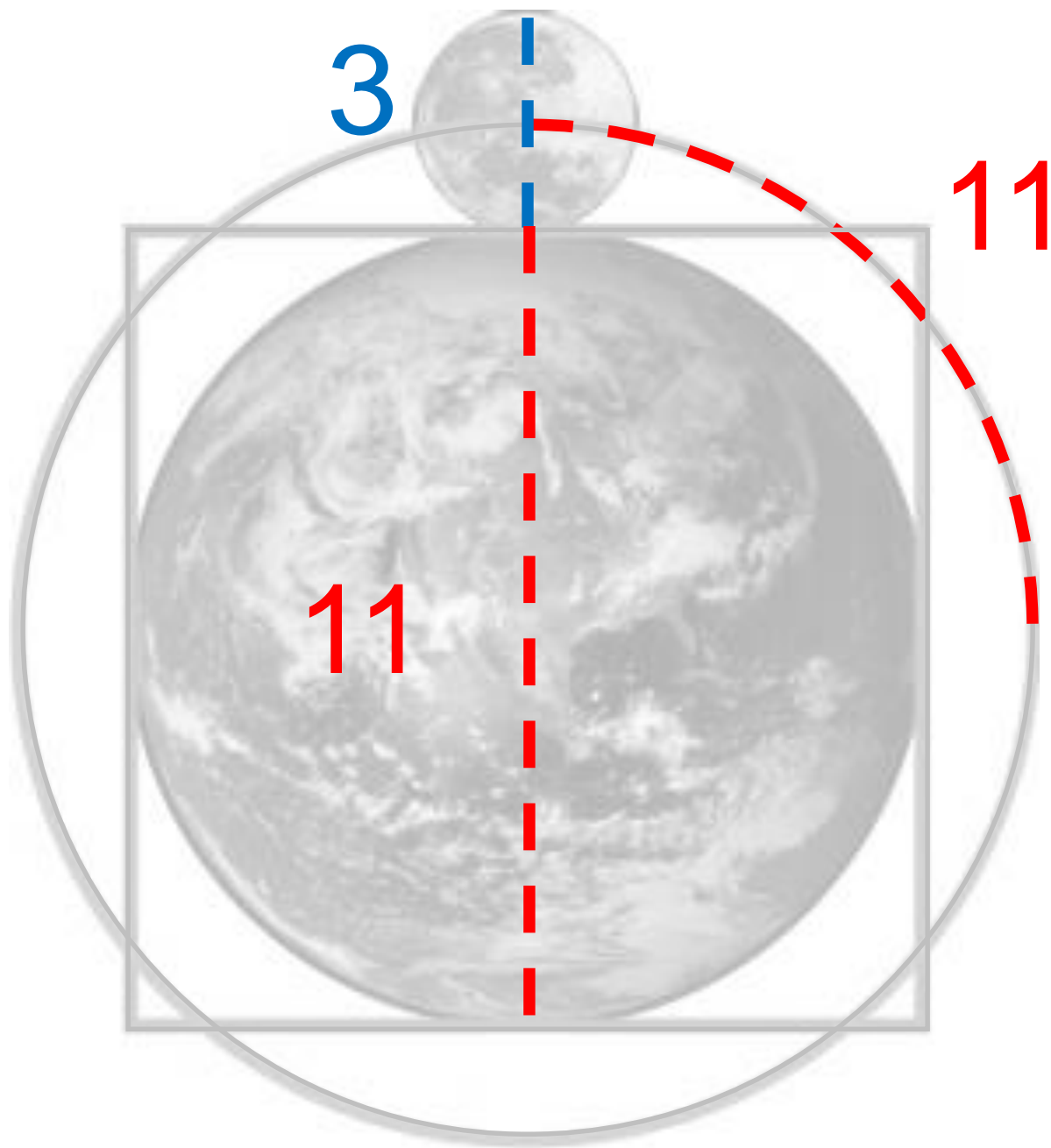


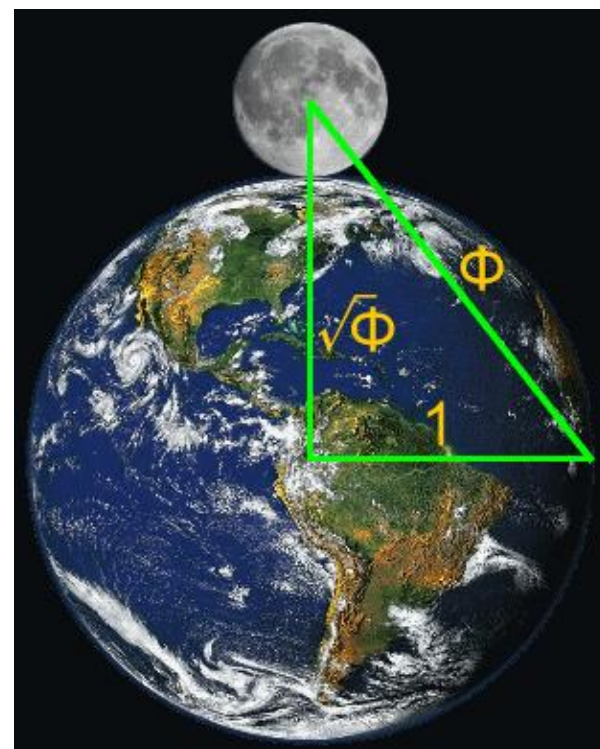
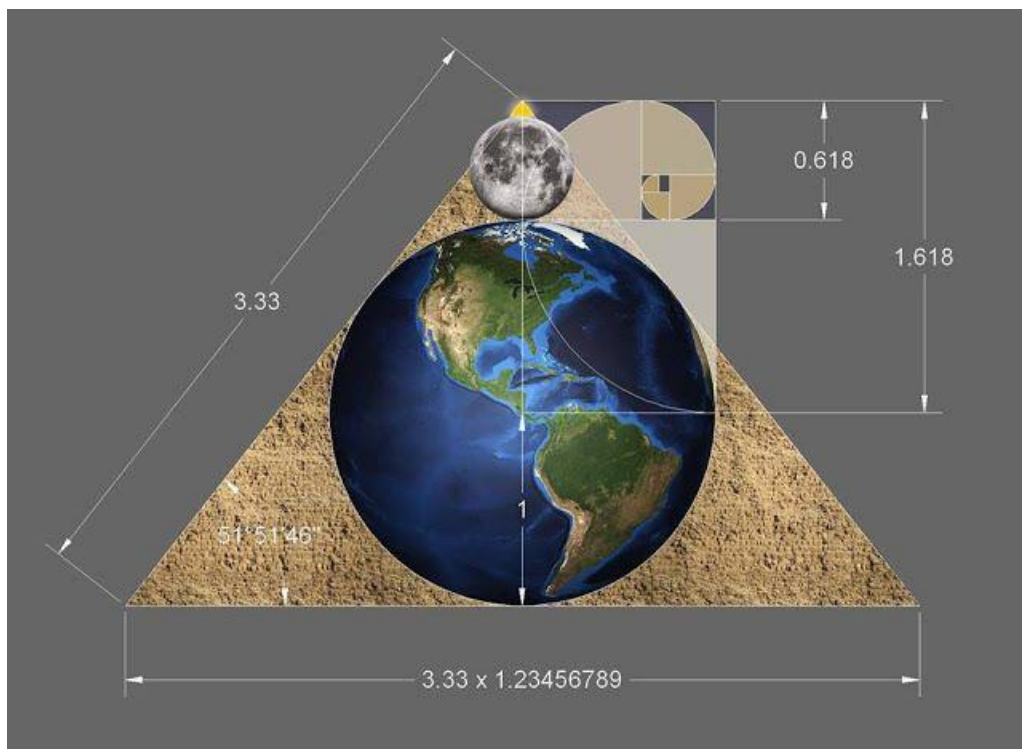
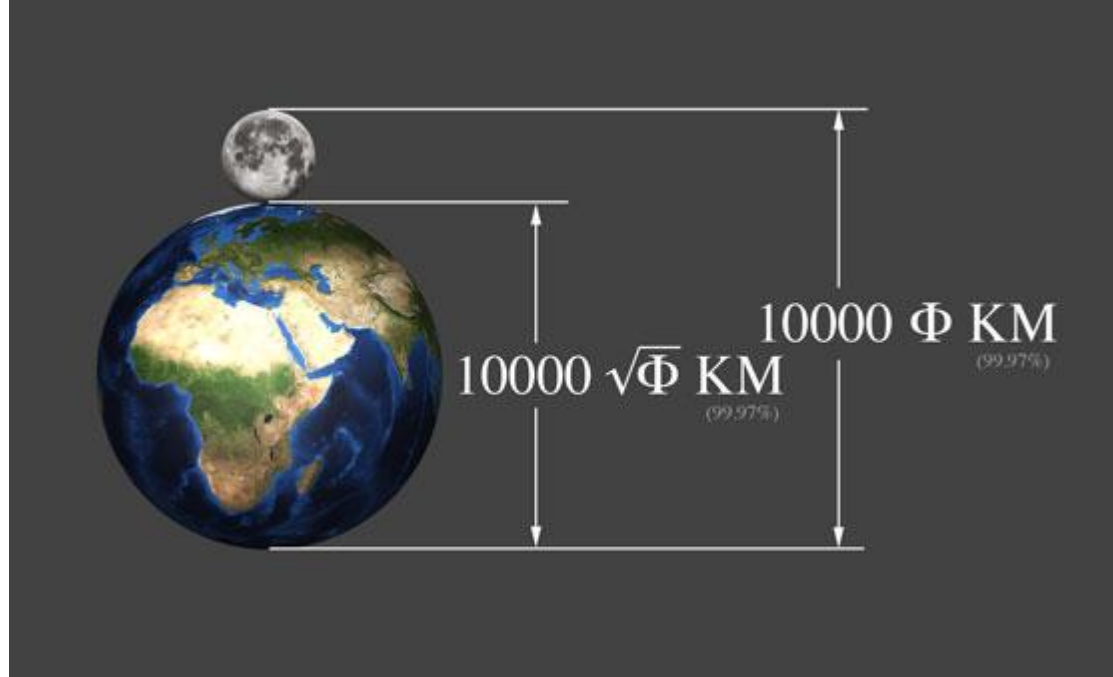
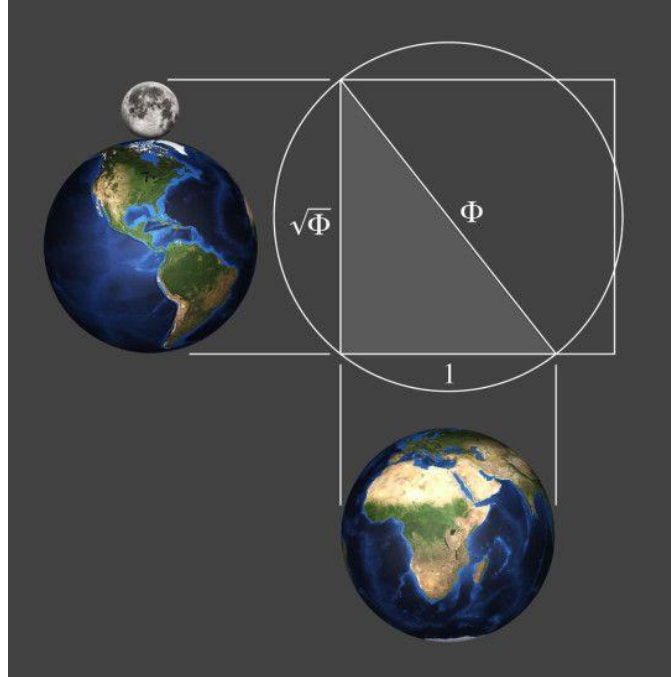
*Great Pyramid is 40 x 7:11 in Royal Cubits*





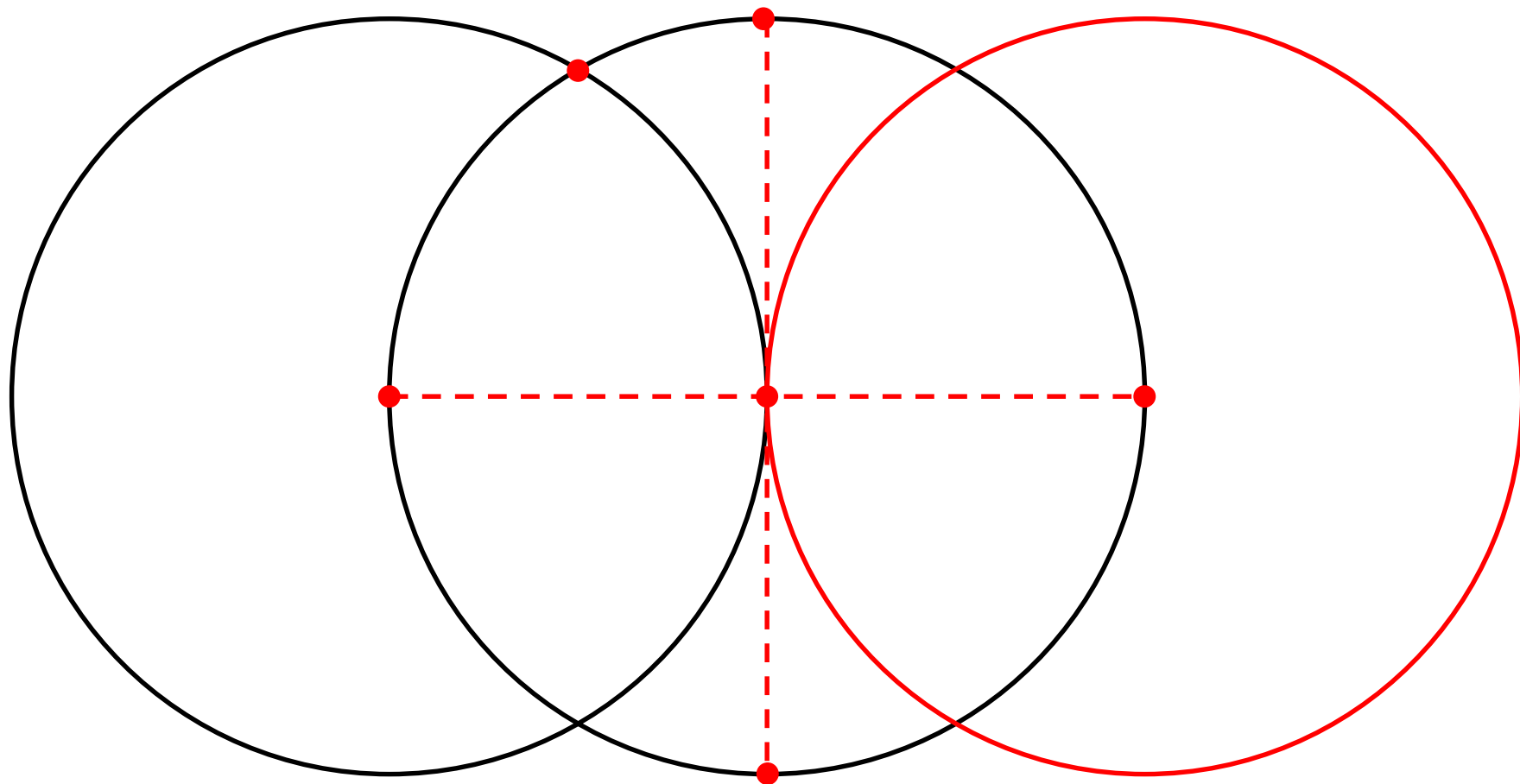


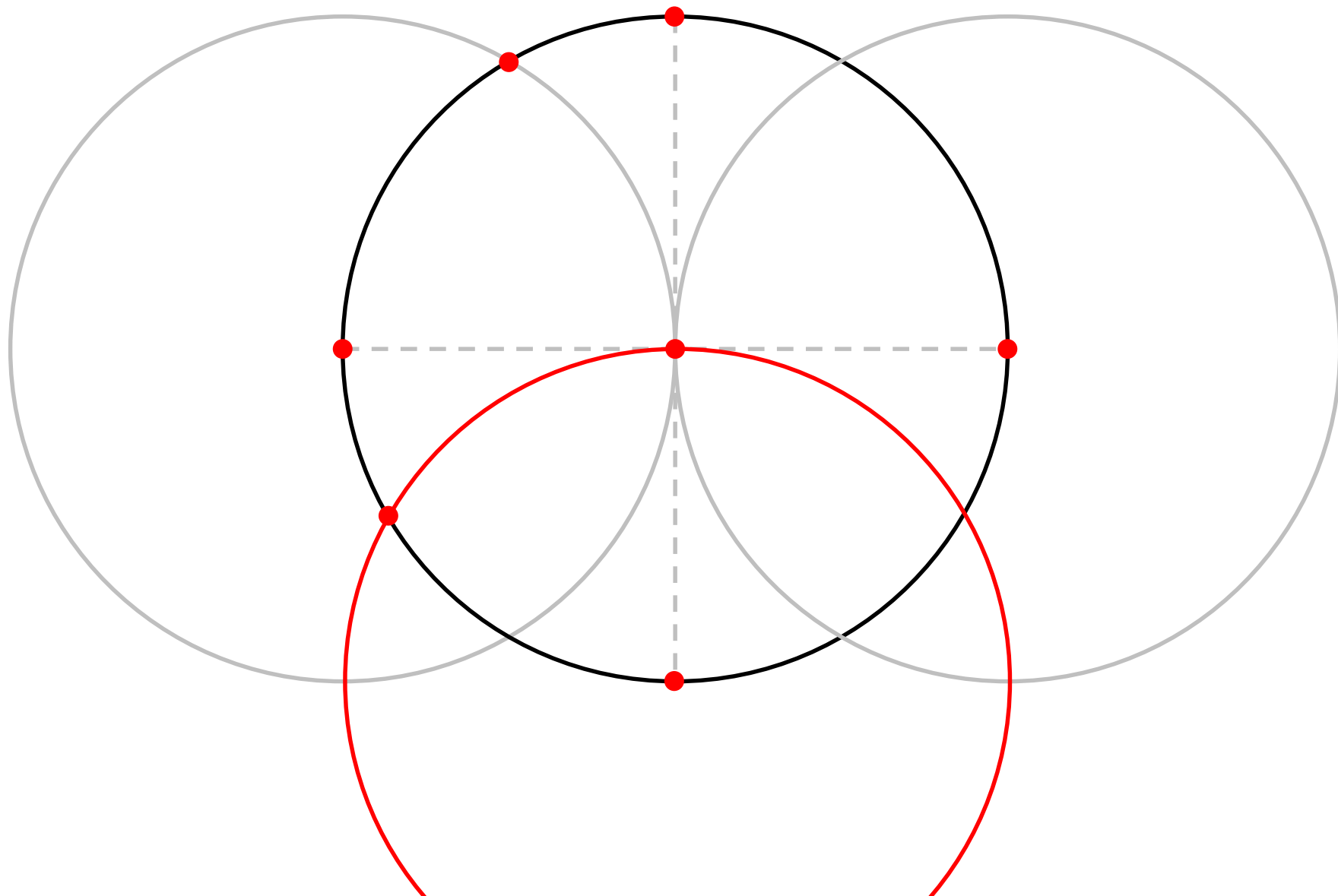


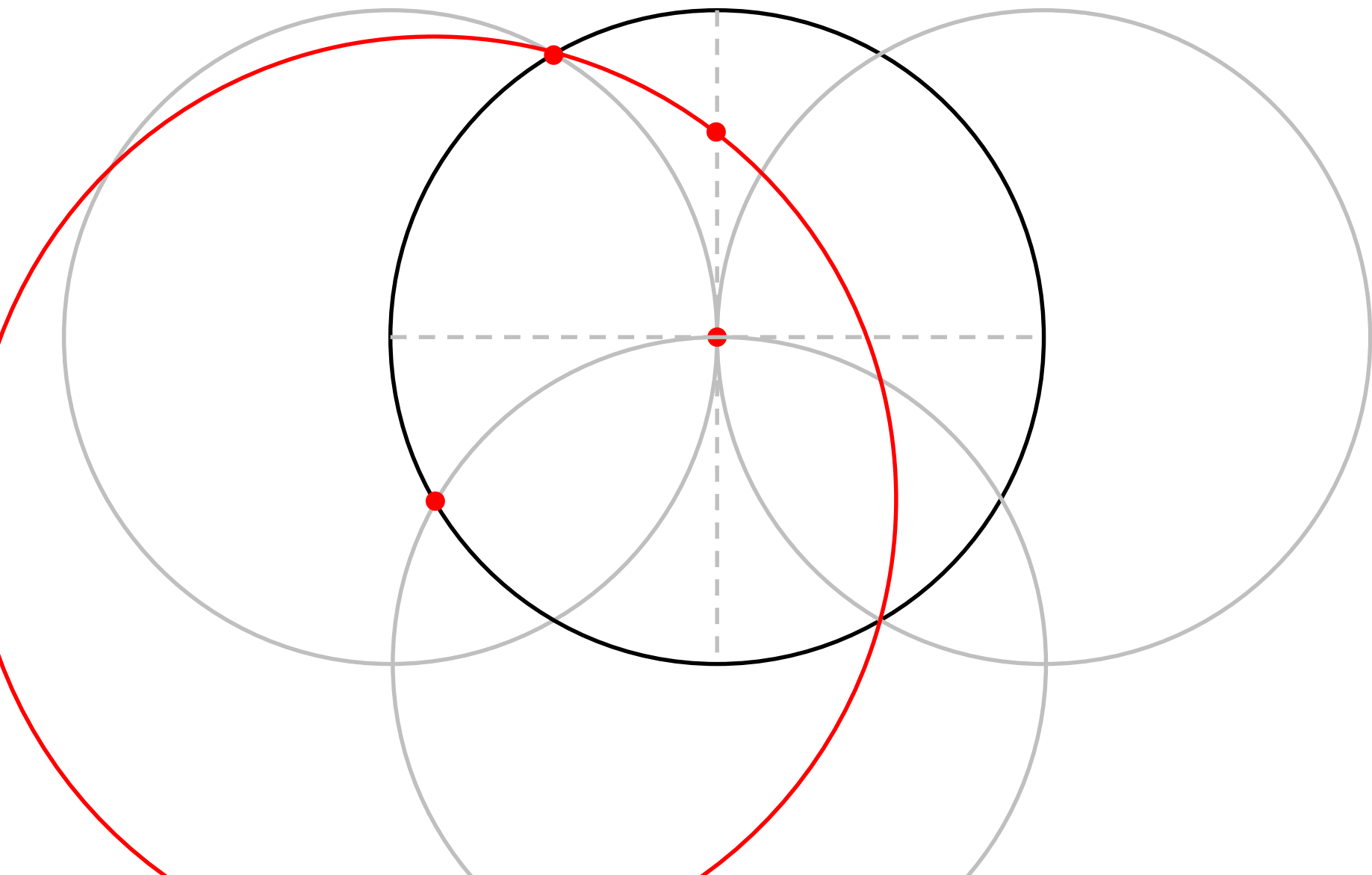




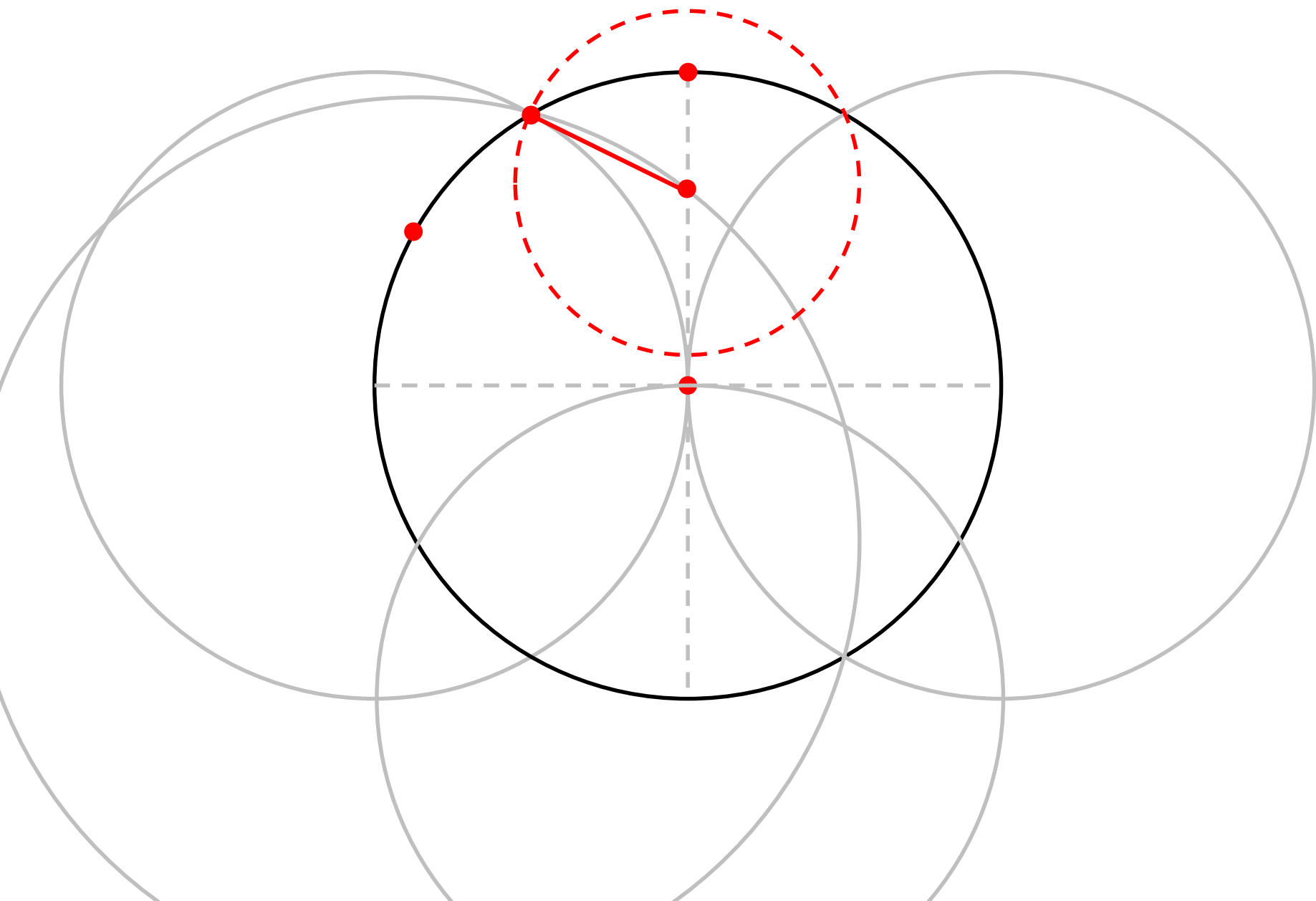
## How to Construct the Hendecagon

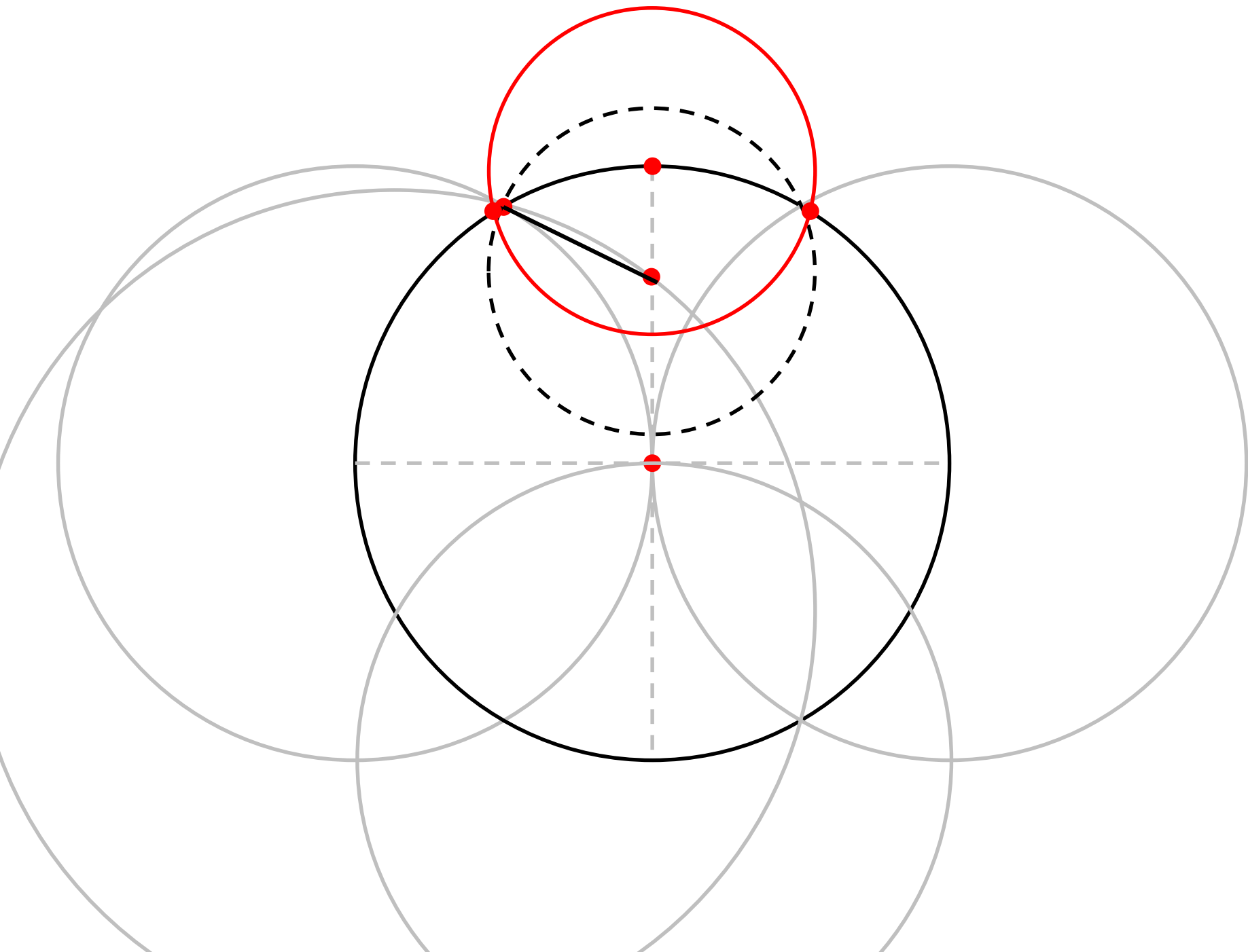


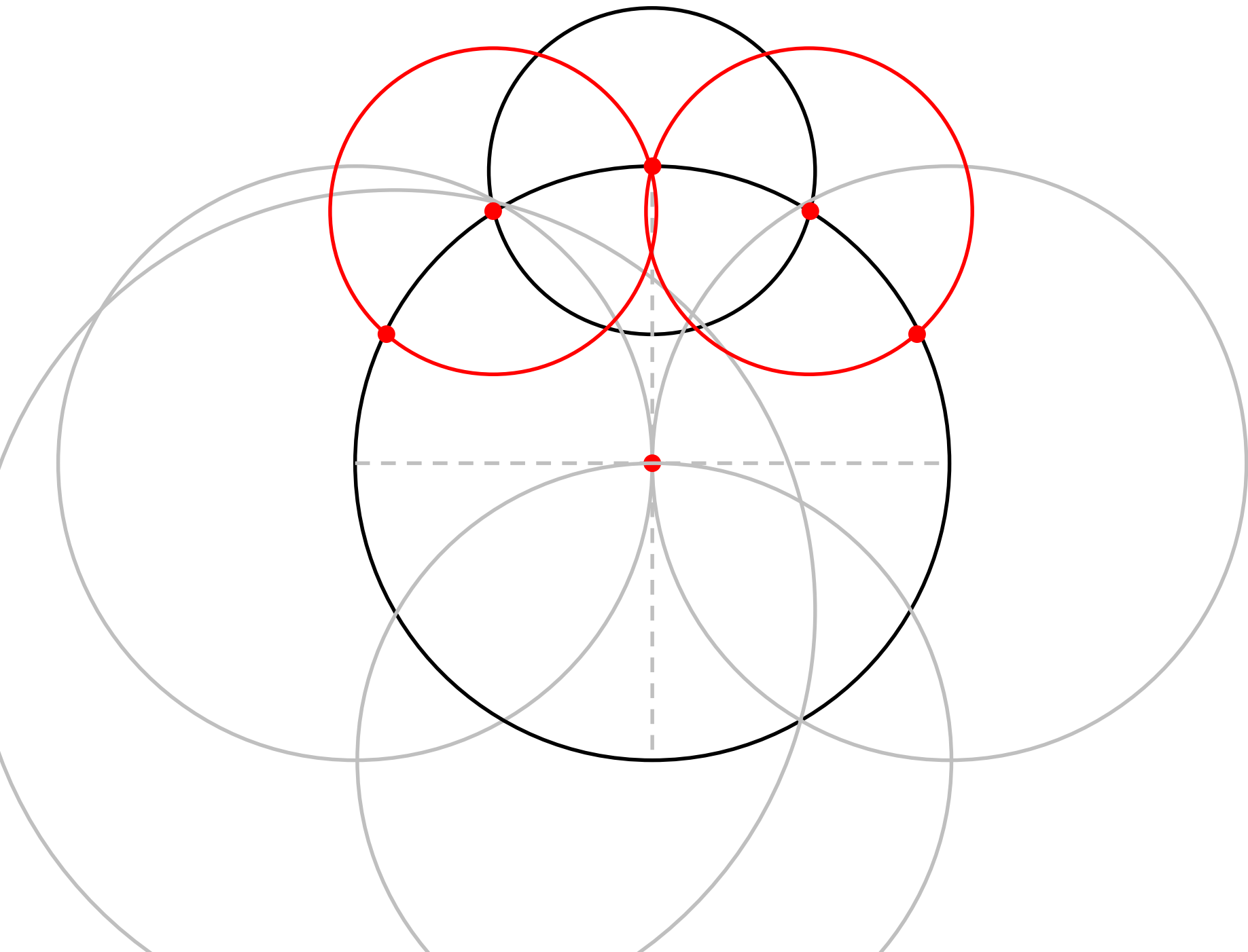


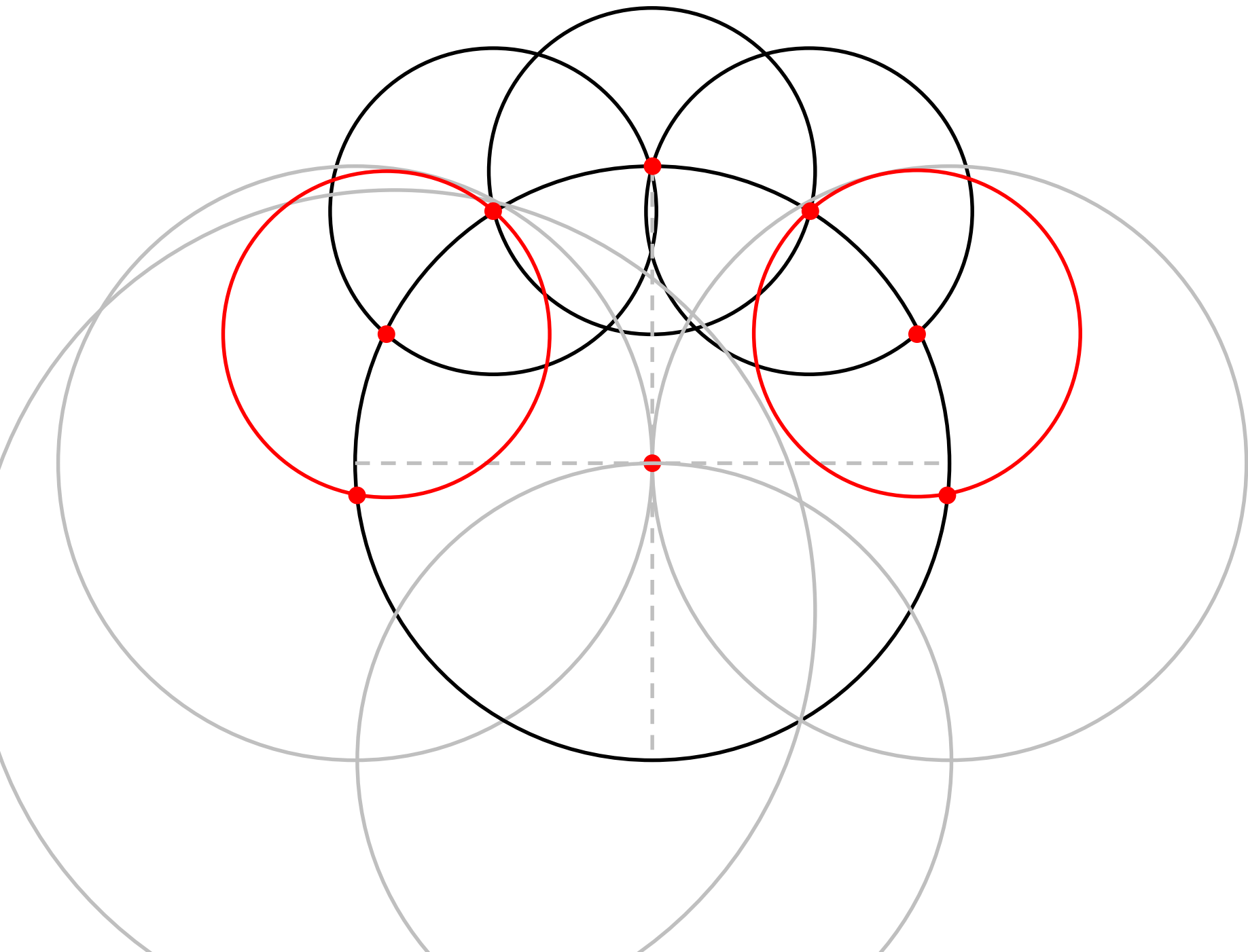




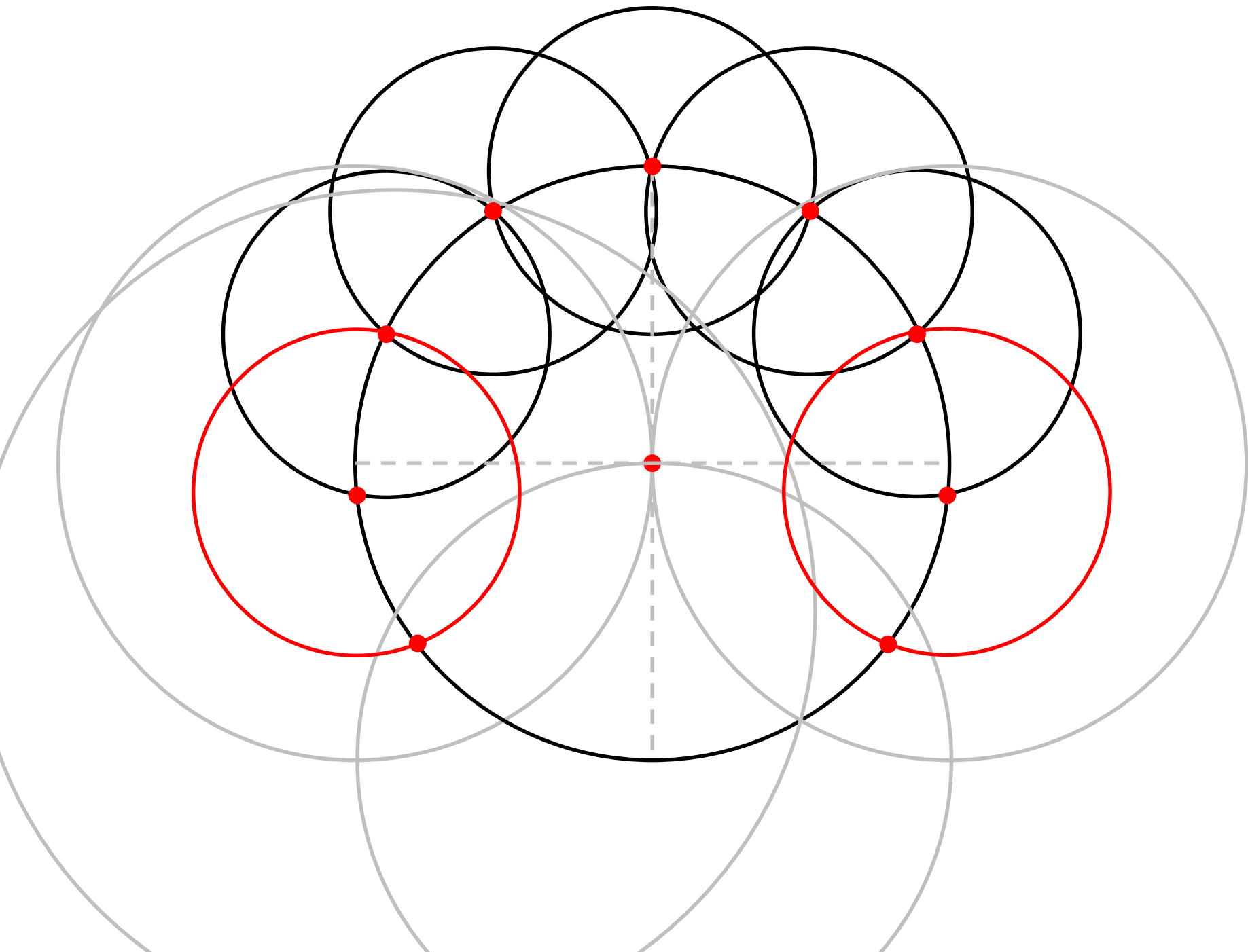


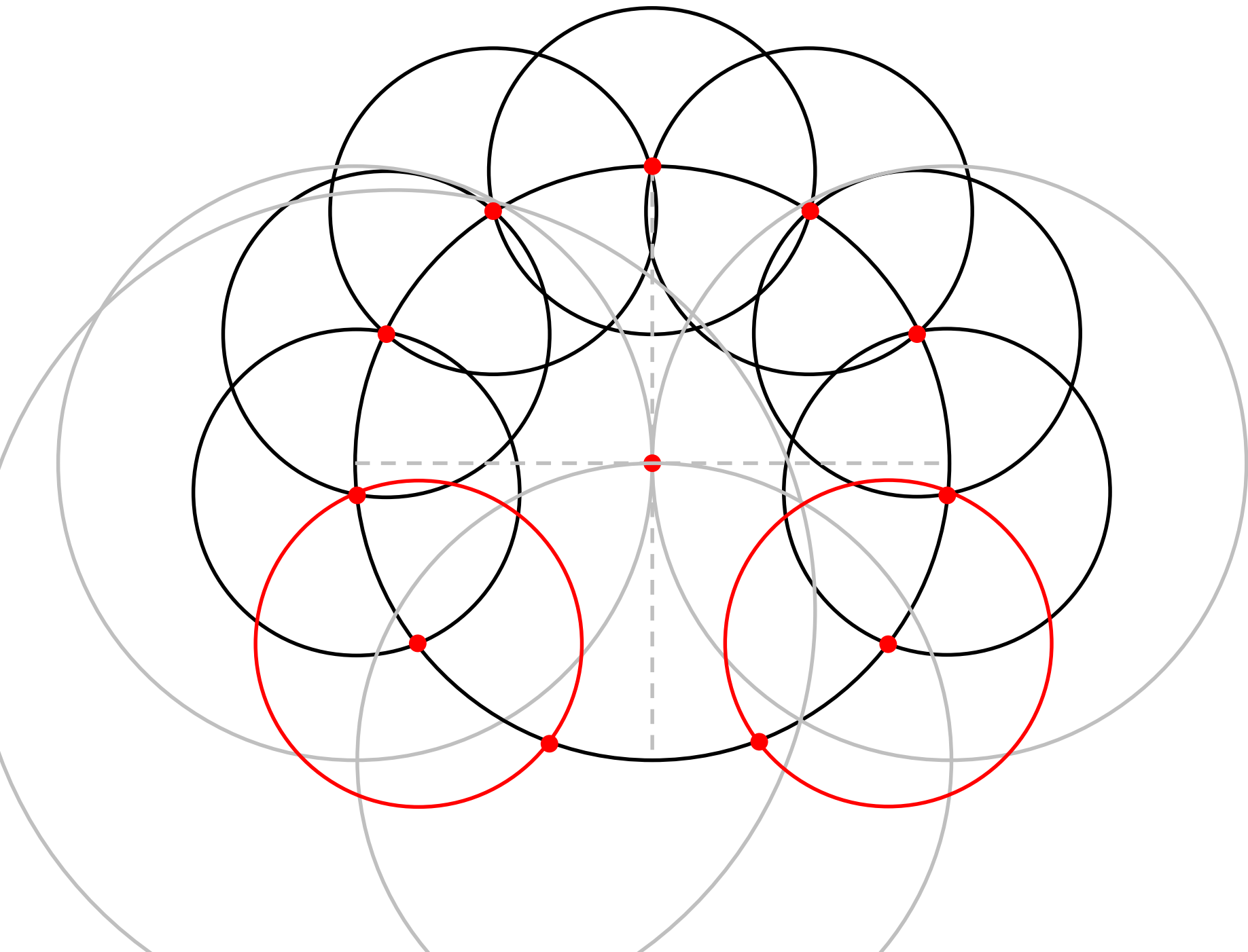


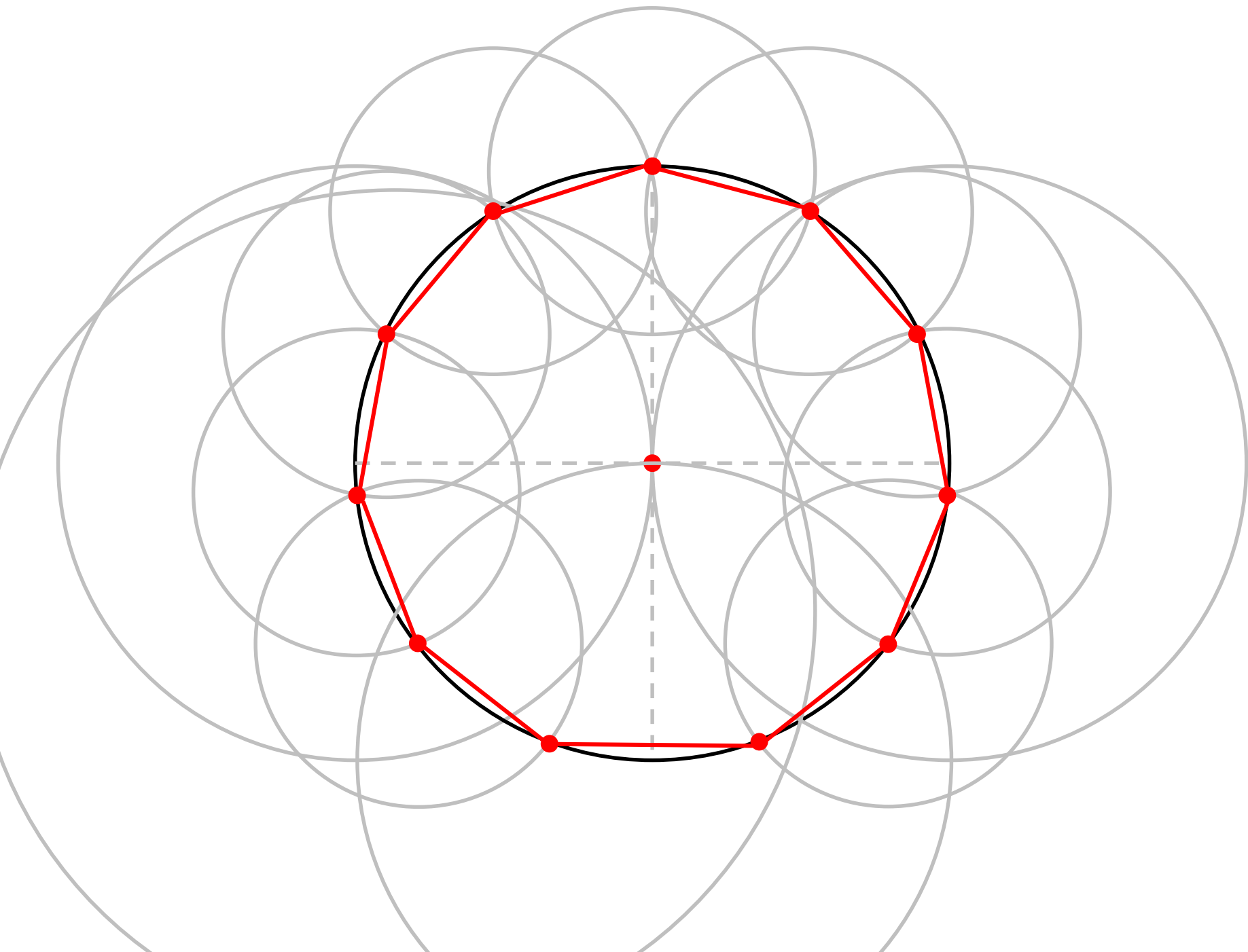








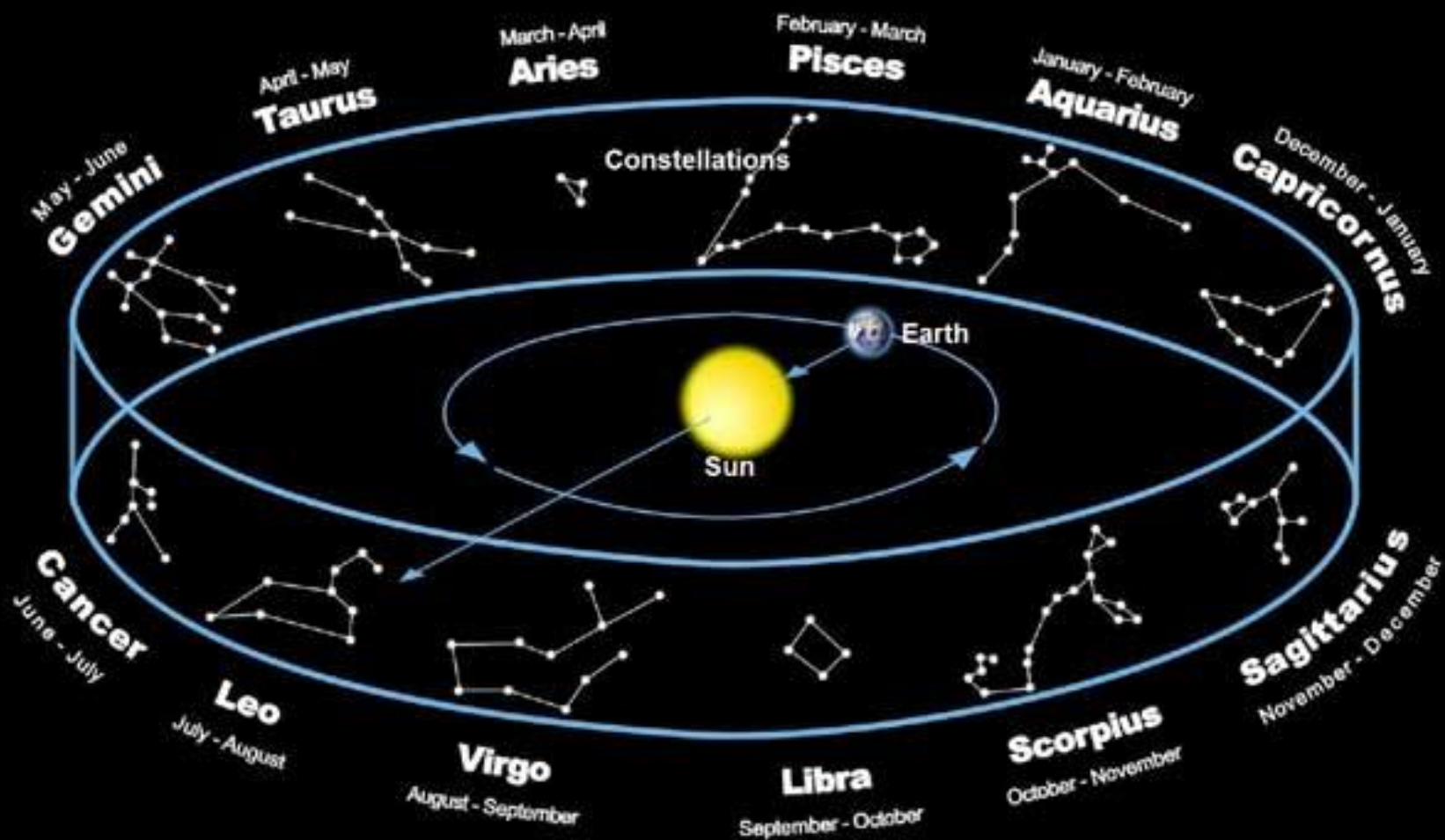




DODEKAD

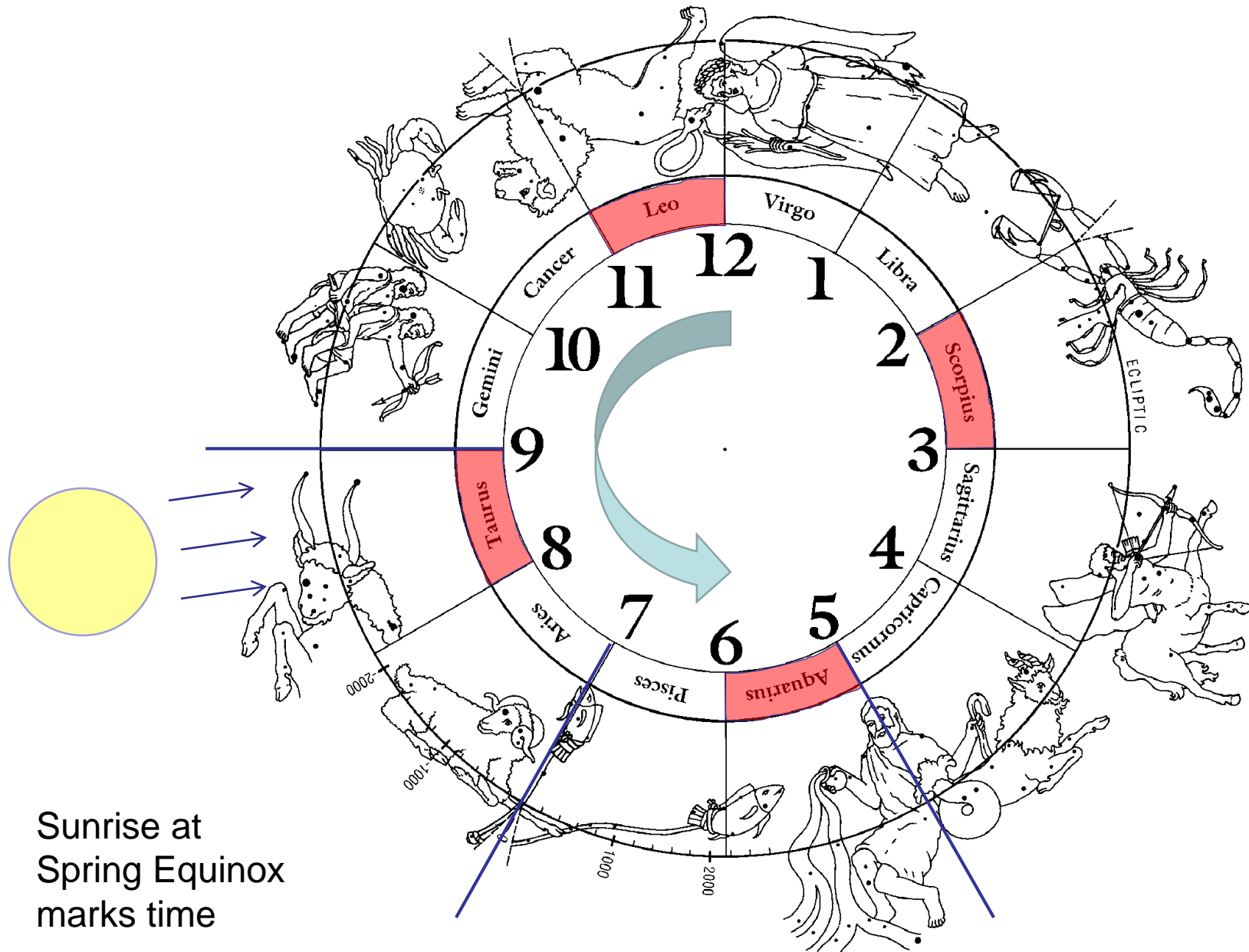
“12”



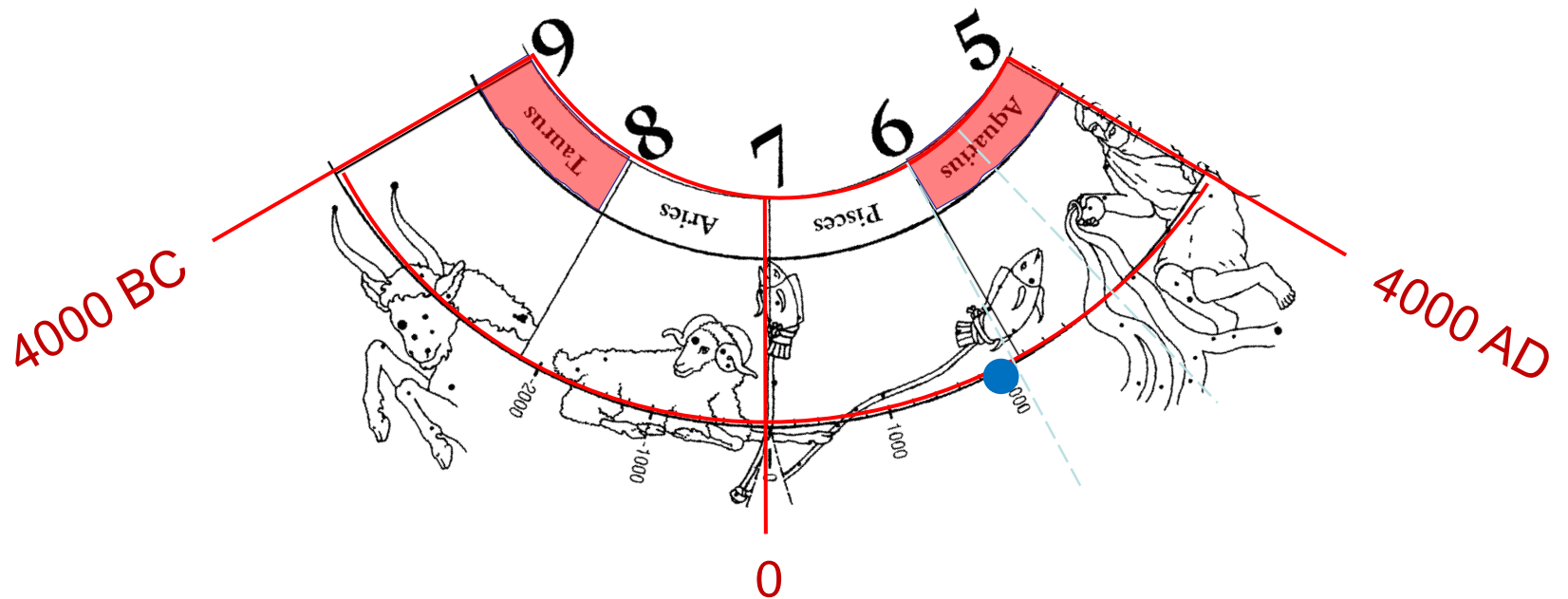


# Zodiac Revolutions – 4 Royal Constellations

## *Northern Hemisphere Counterclockwise*



# Constellations are Earth's Clock



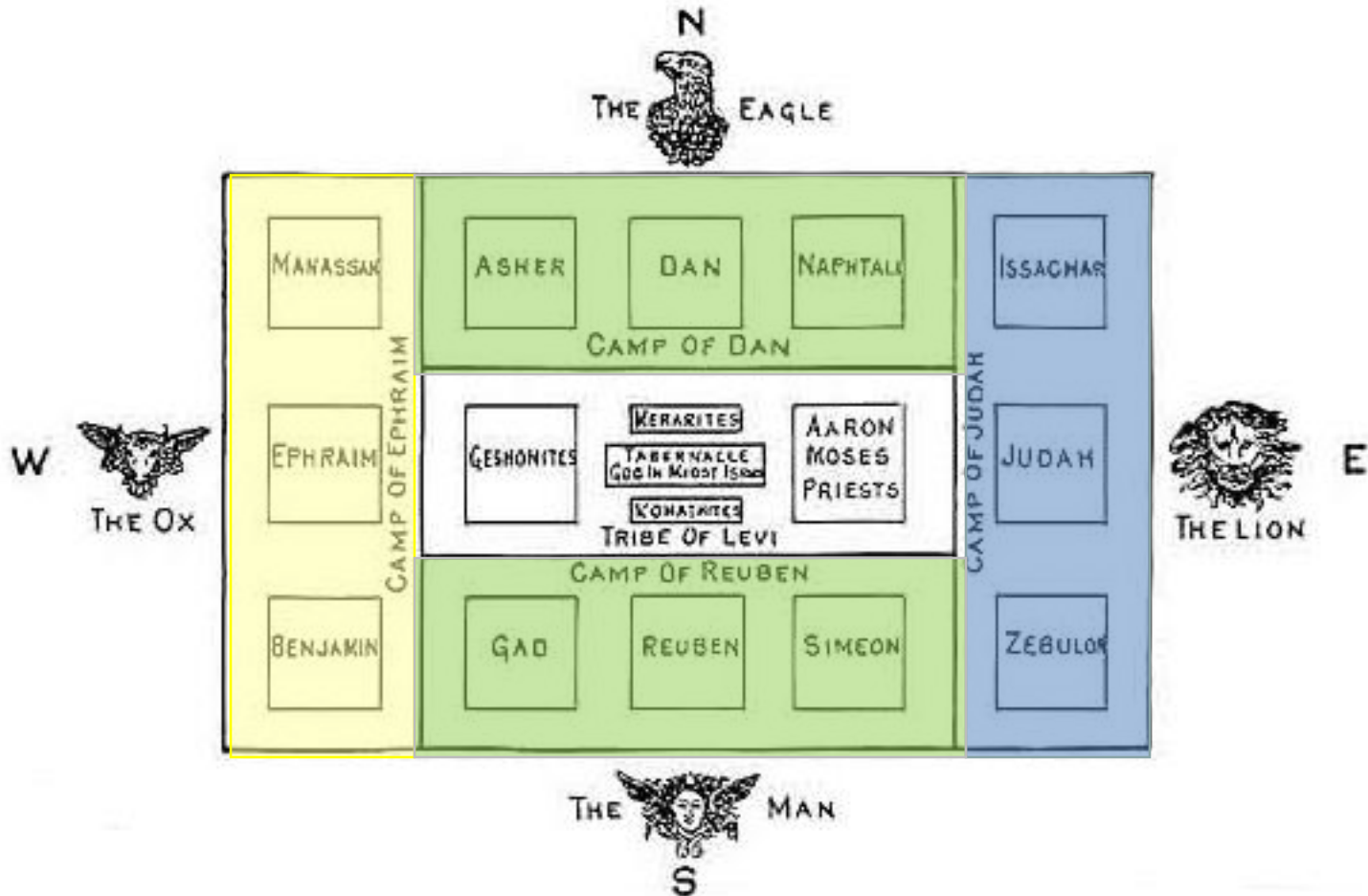


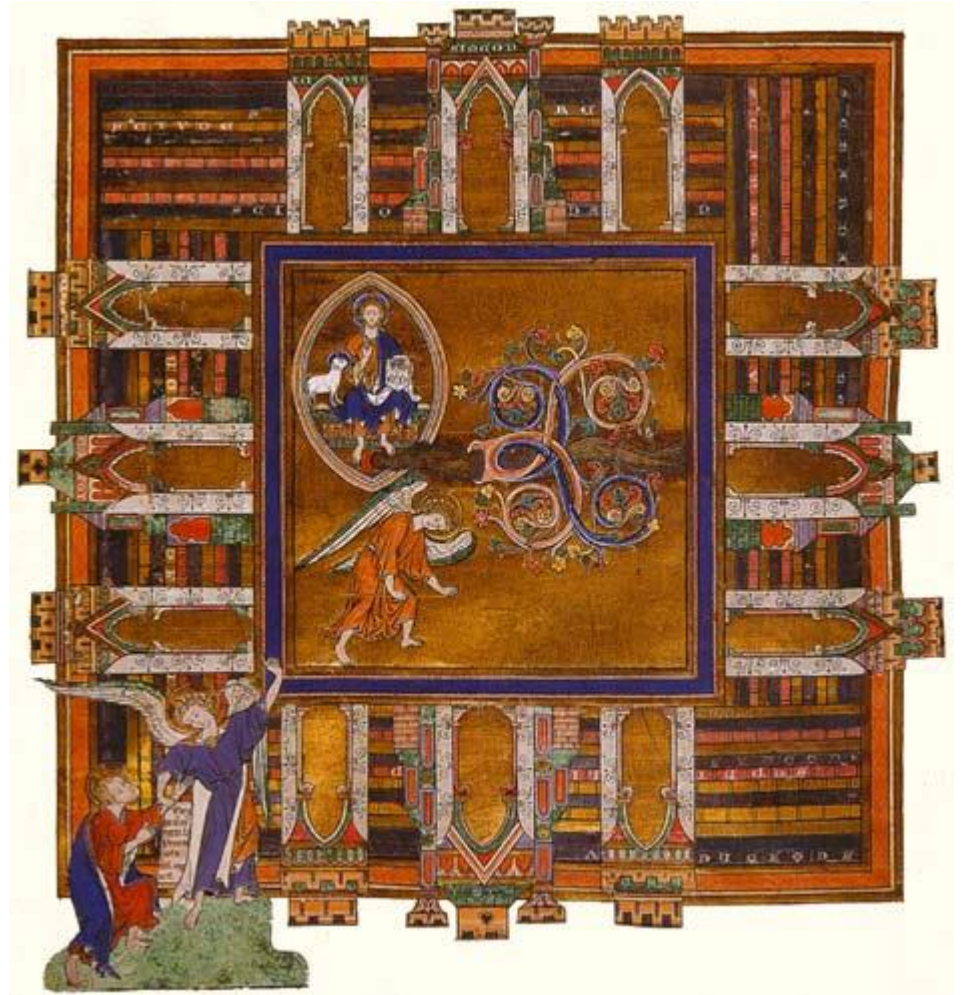




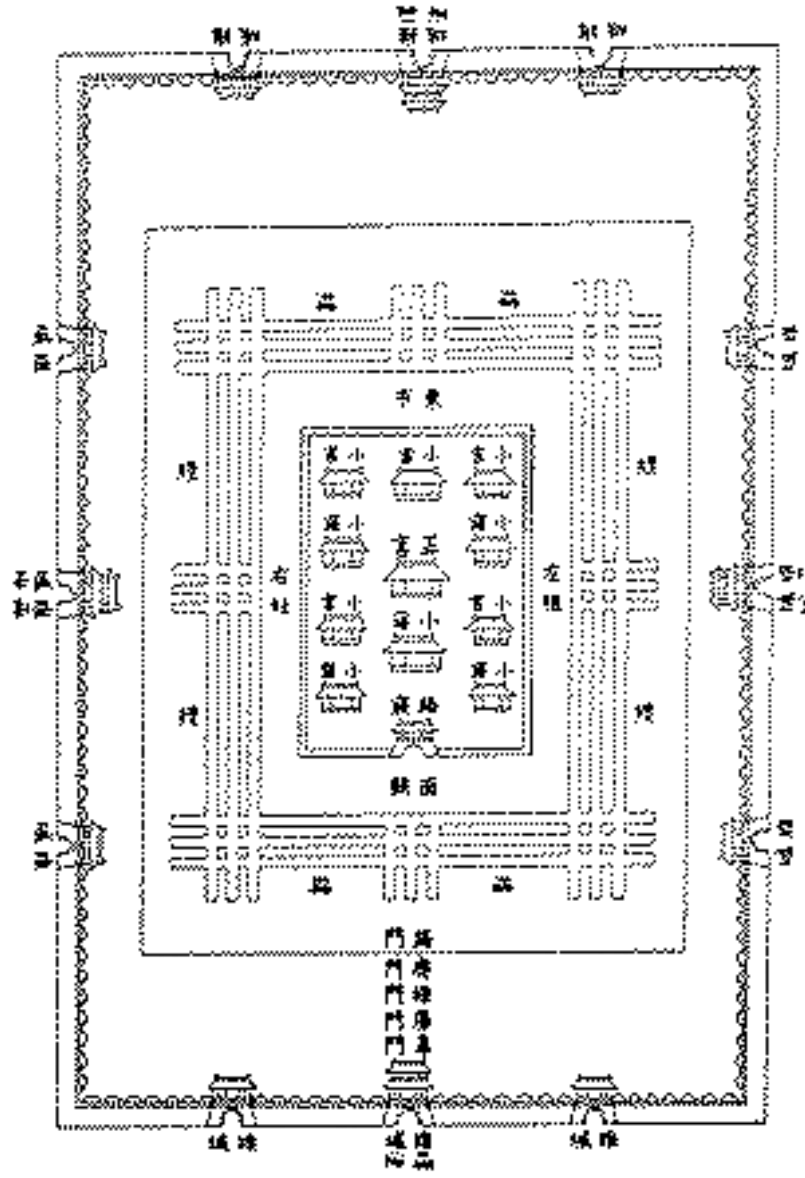
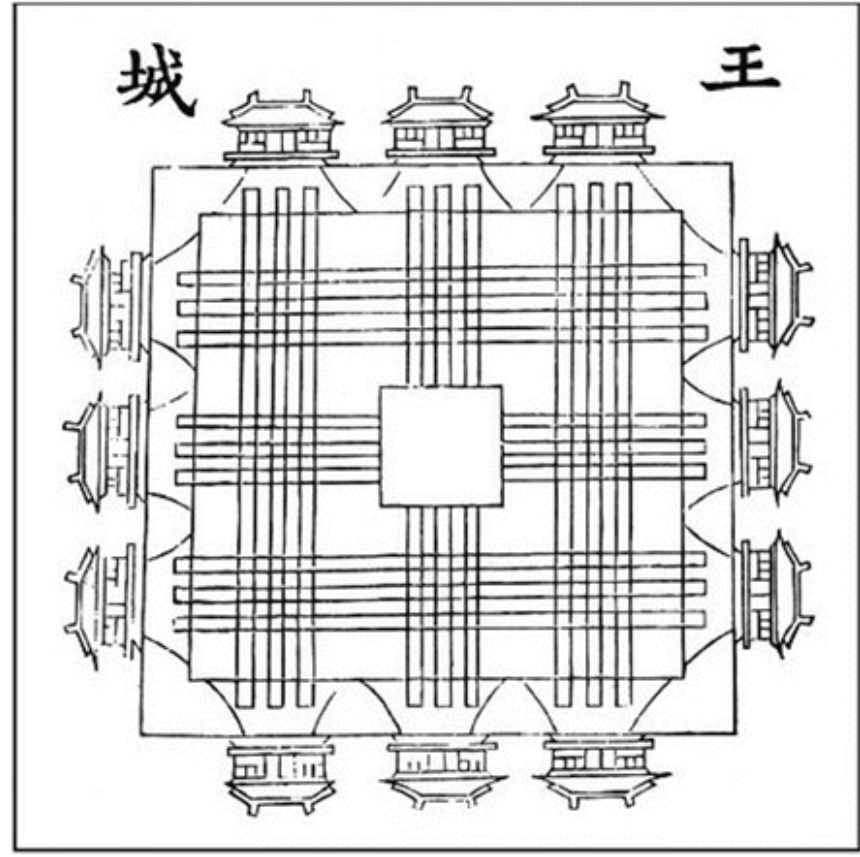
## Temple as Image of Cosmos – Cyclical Time

*Banners + Directionality in Camp of Israel (Num. 2:2-3, 10, 18, 25)*

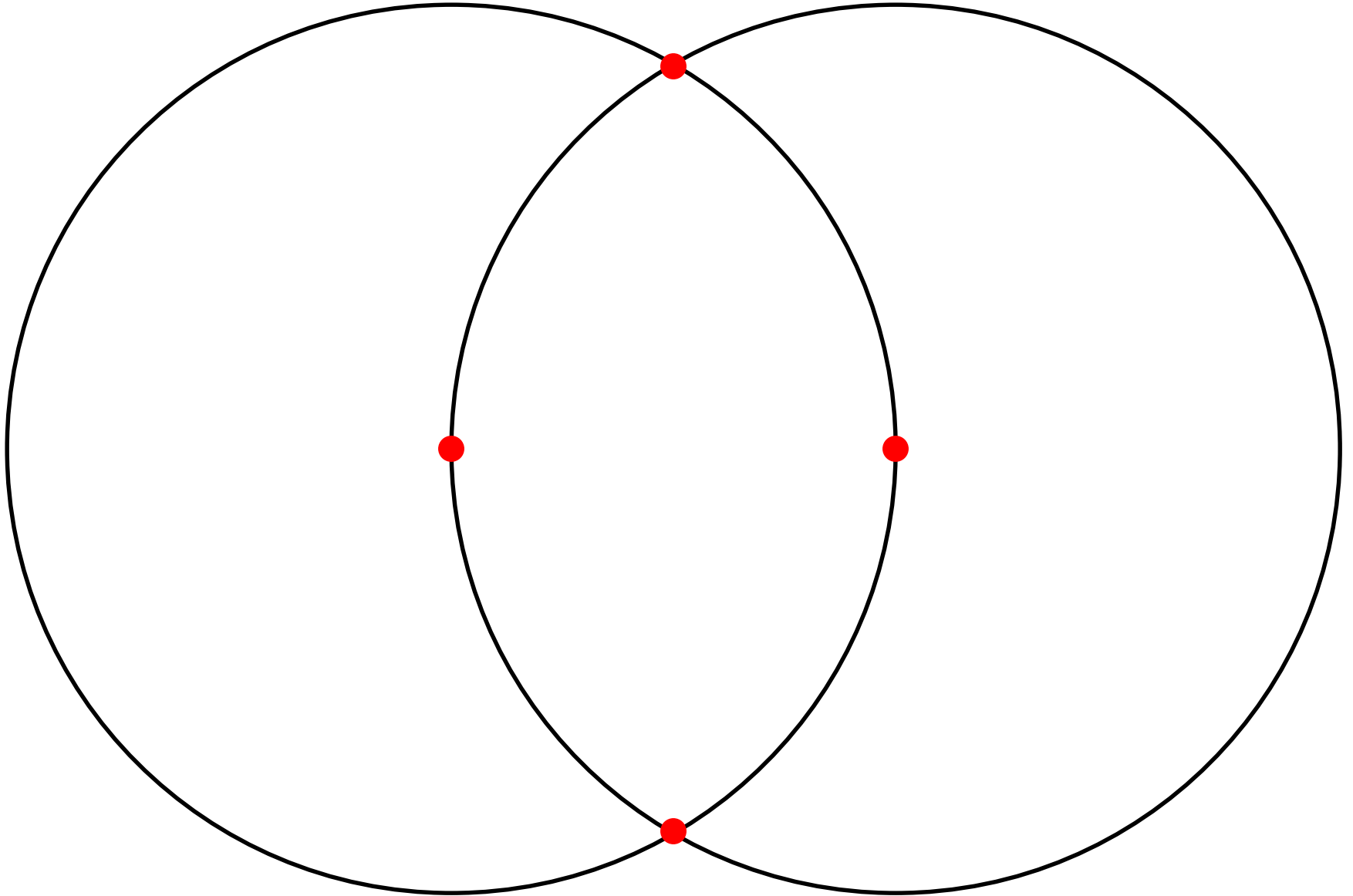




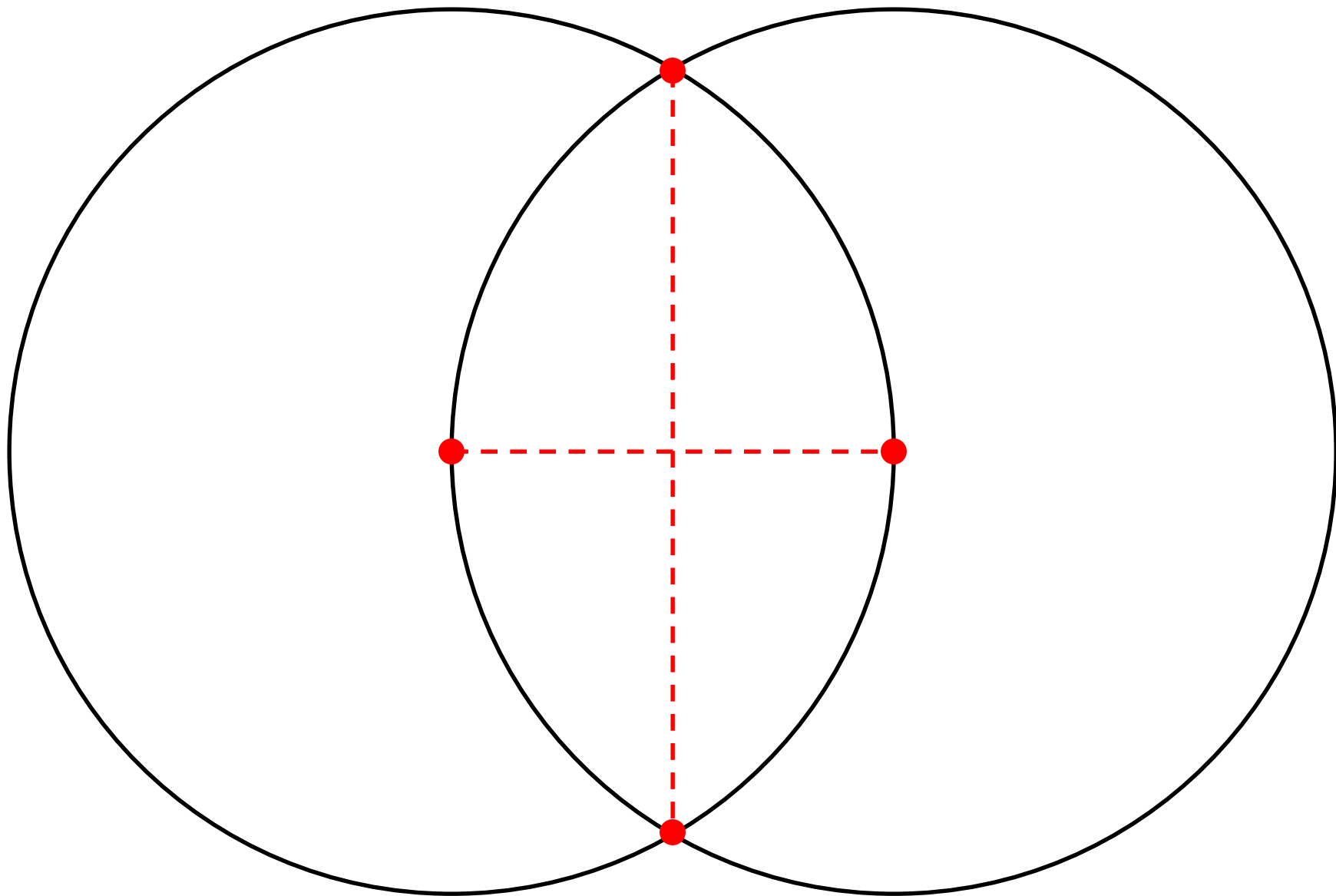


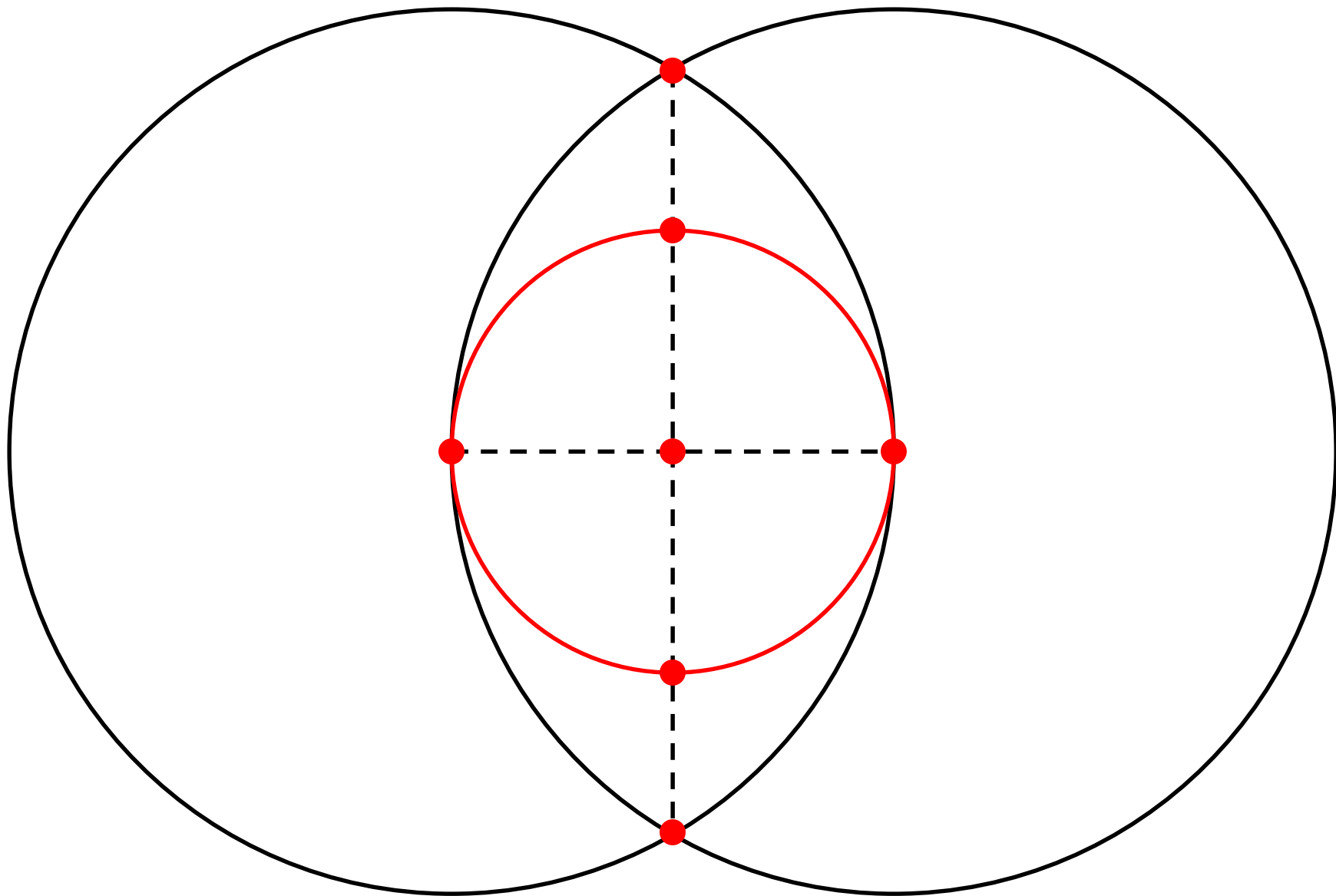


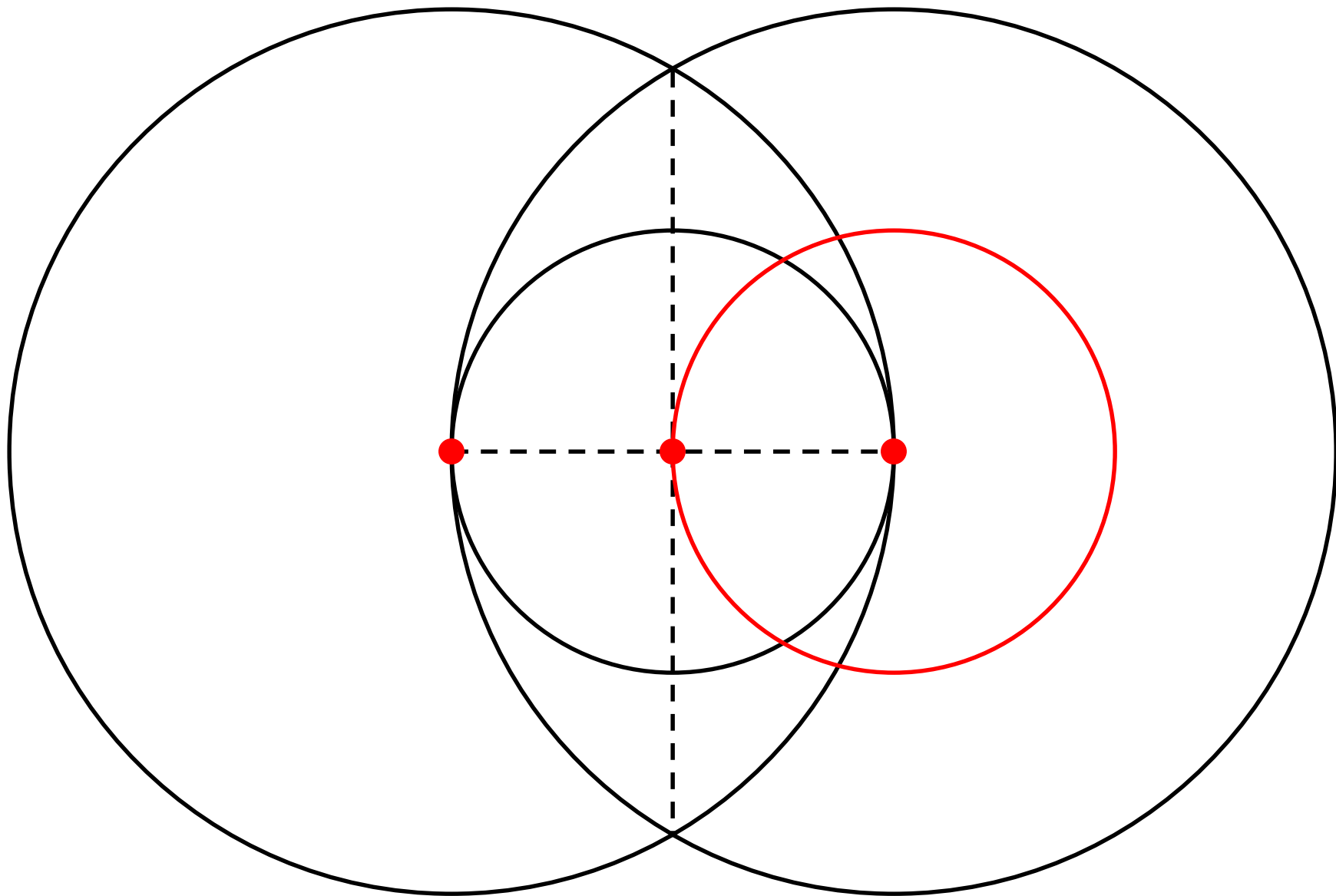
# How to Construct the Dodekagon

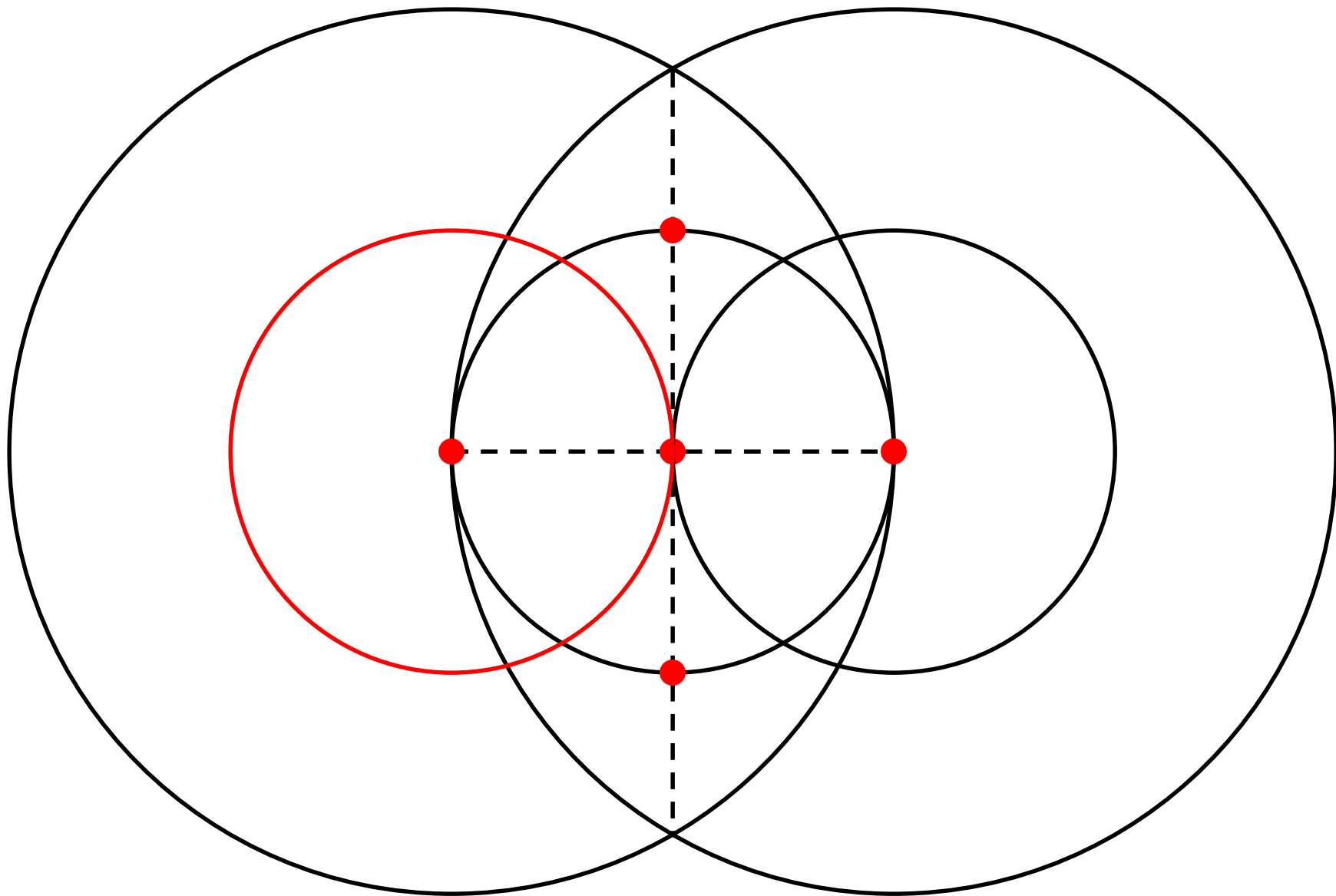




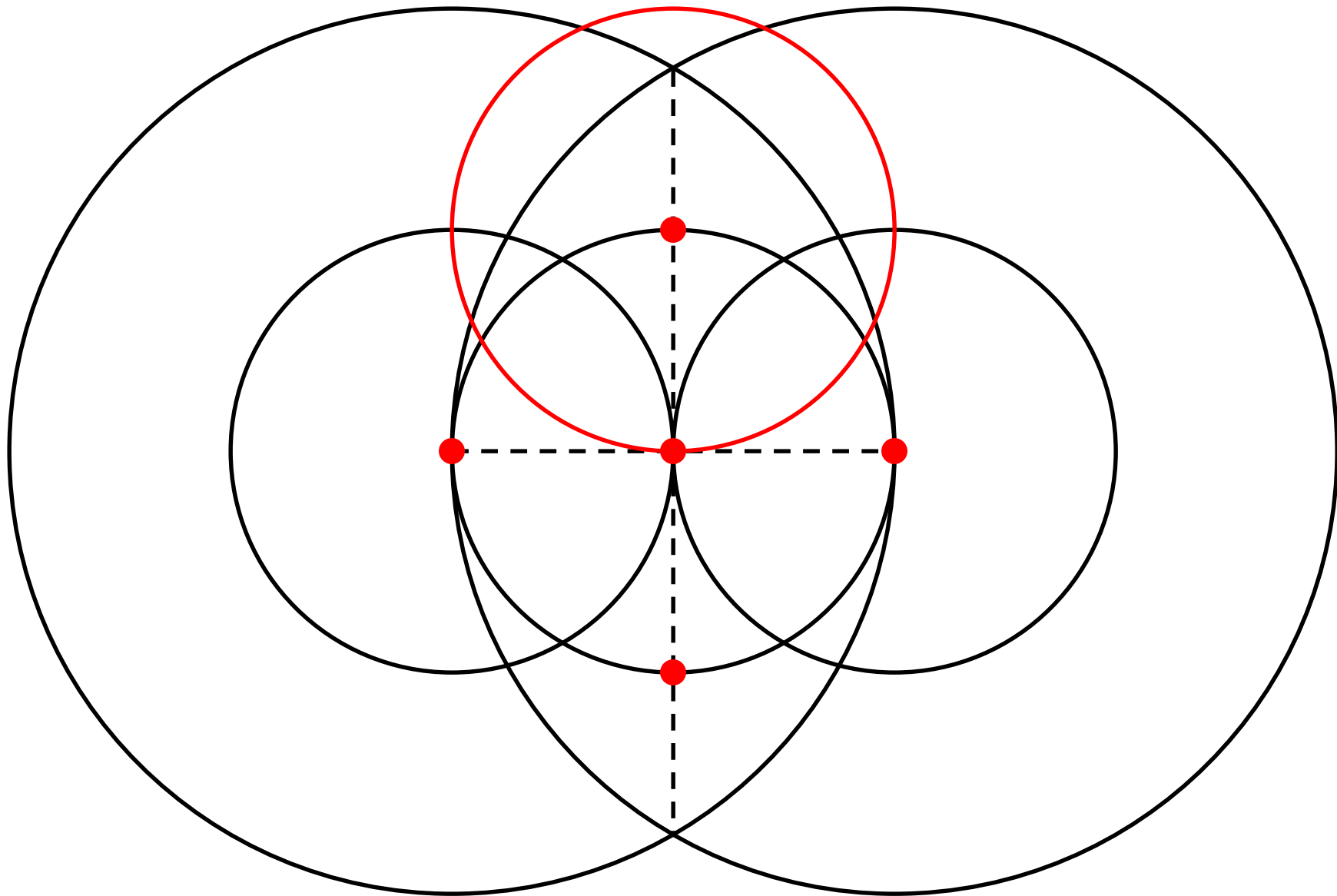


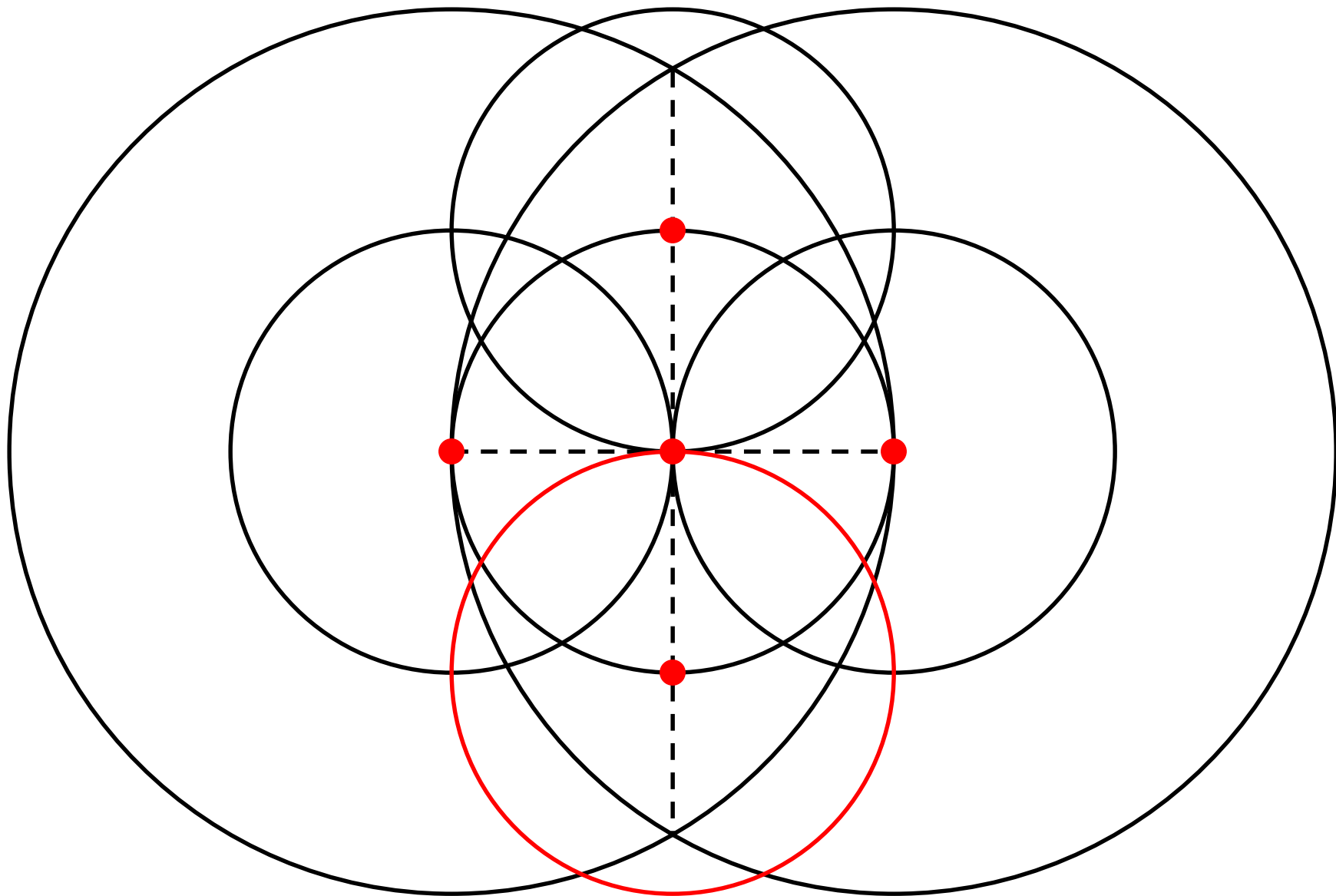


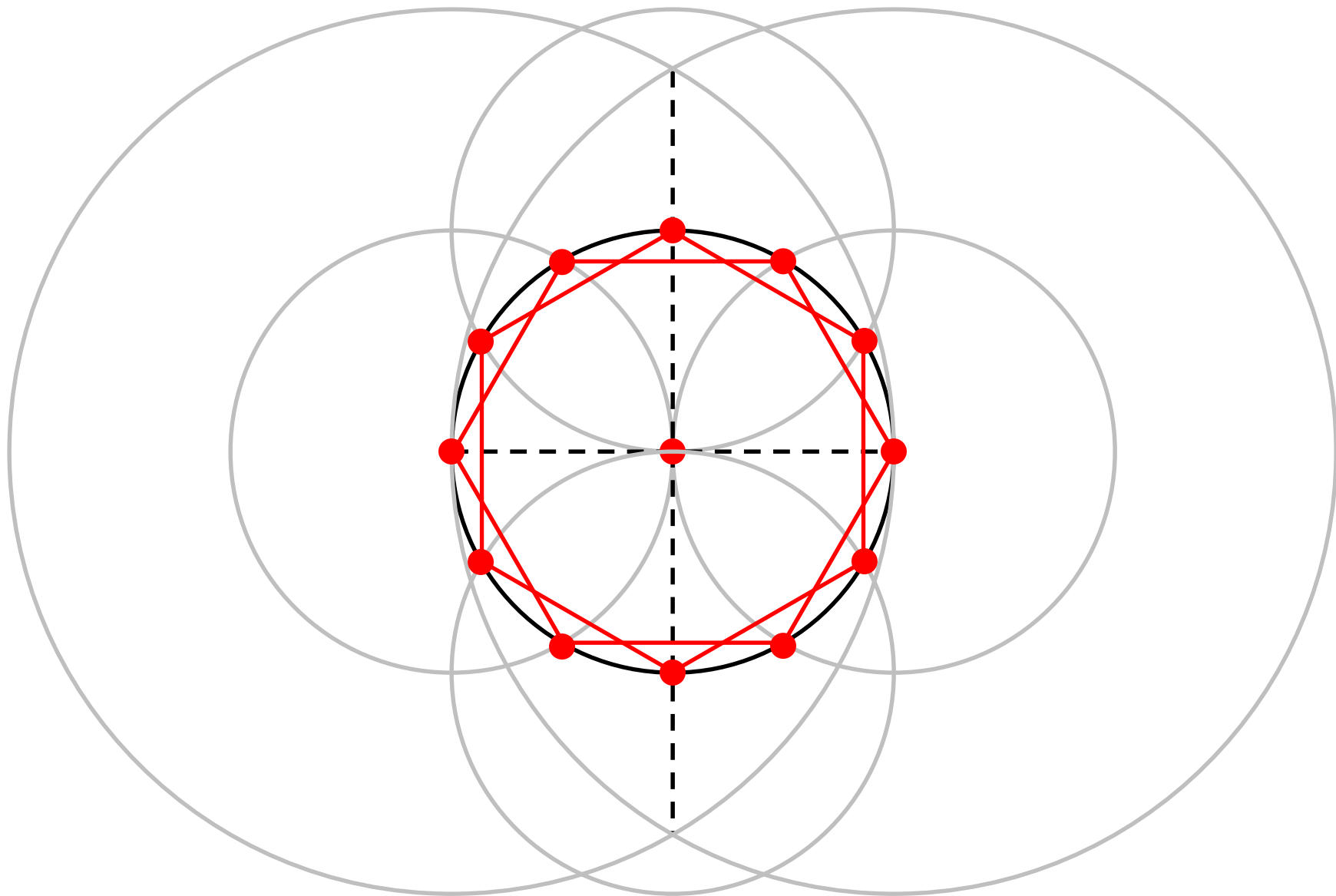


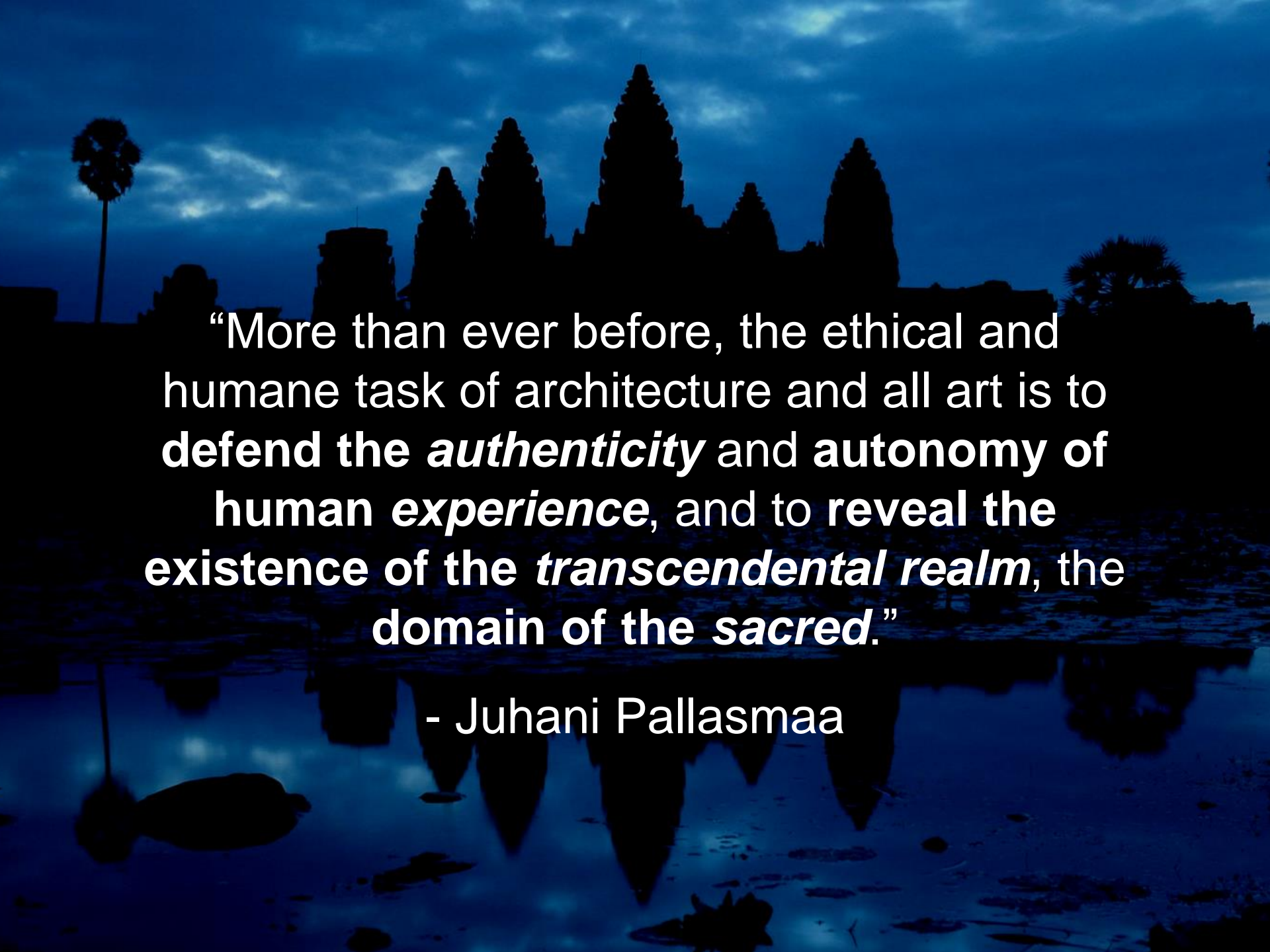












“More than ever before, the ethical and humane task of architecture and all art is to defend the *authenticity* and *autonomy* of human *experience*, and to reveal the existence of the *transcendental realm*, the domain of the *sacred*.”

- Juhani Pallasmaa