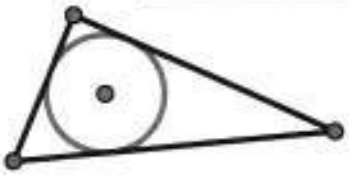
Section 1.3

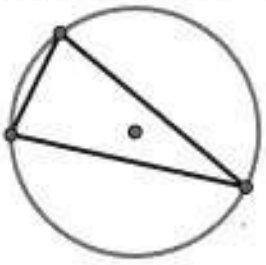
G.CO.13 WORKSHEET #1 – PATTERSON **NAME:** Key **1**

1. Determine whether the relationships is INSCRIBED or CIRCUMSCRIBED.

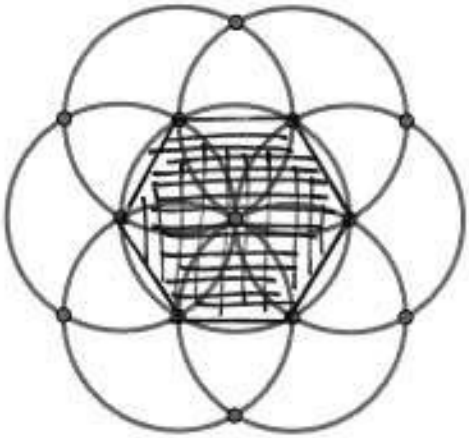
a) The triangle is INSCRIBED b) The hexagon is CIRCUMSCRIBED The circle is INSCRIBED

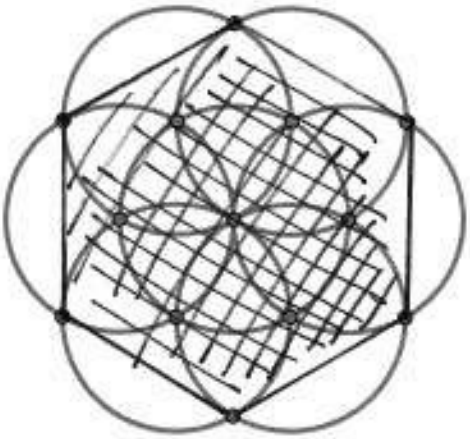


d) The hexagon is INSCRIBED e) The circle is CIRCUMSCRIBED f) The triangle is INSCRIBED

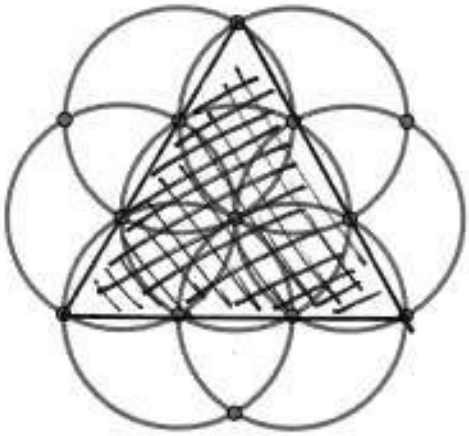


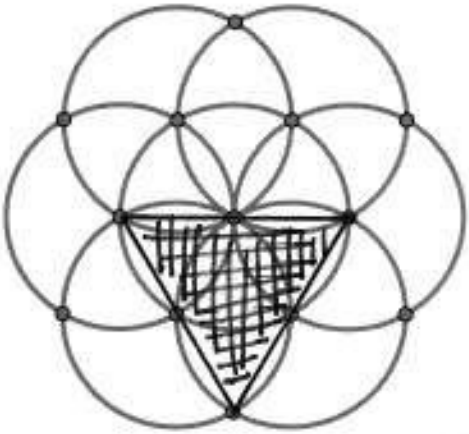
2. Jeff uses his compass to make a cool design. He just keeps creating congruent circles... over and over... Can you find a regular hexagons and an equilateral triangle hidden in his design? Draw in the lines and shade them.





LOTS OF DIFFERENT ANSWERS





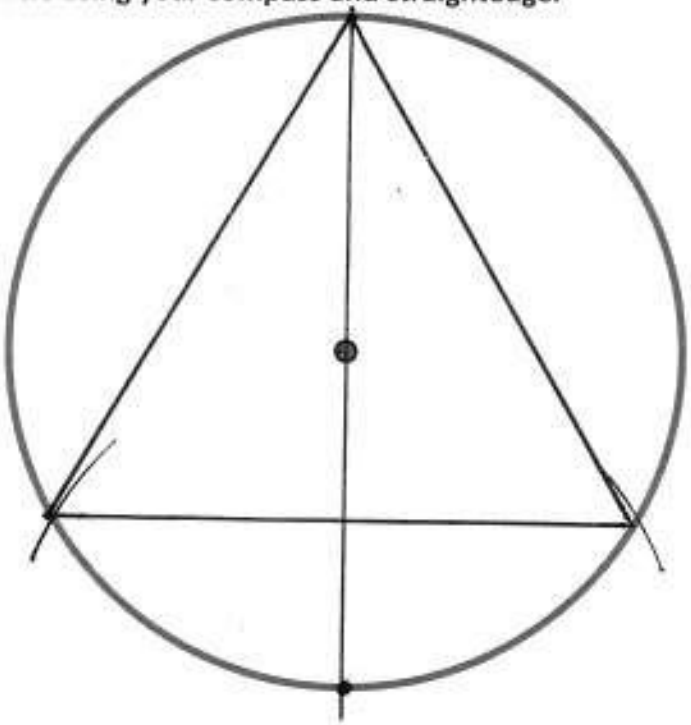
Section 1.3

G.CO.13 WORKSHEET #1 – PATTERSON *2*

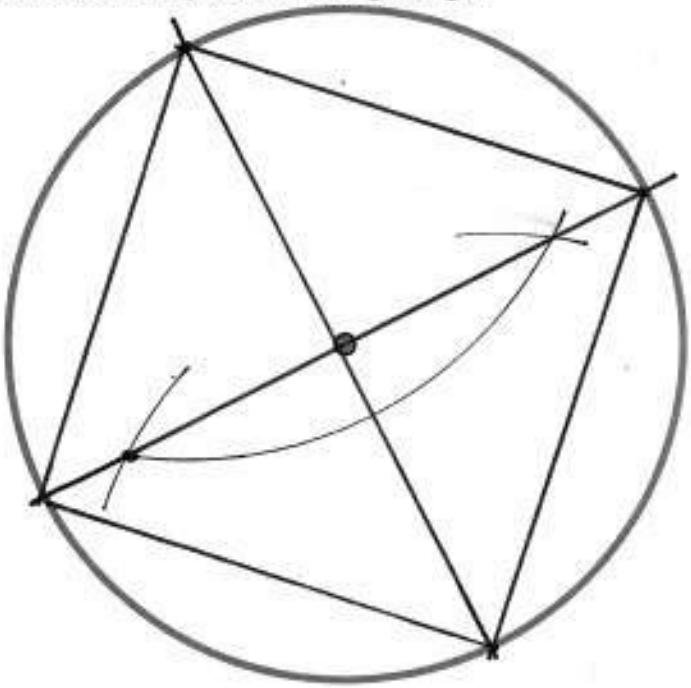
3. The inscribed equilateral triangle has a central angle of 120° because 360° / 3 = 120°, an inscribed square has a central angle of 90° because 360° / 4 = 90°. The central angle of a decagon is 36° because 360° / 10 = 36°. Use this information and a compass to create an inscribed decagon.

4. Construct the requested inscribed polygons.

a) Construct an equilateral inscribed in the provided circle using your compass and straightedge.



b) Construct a square inscribed in the provided circle using your compass and straightedge.

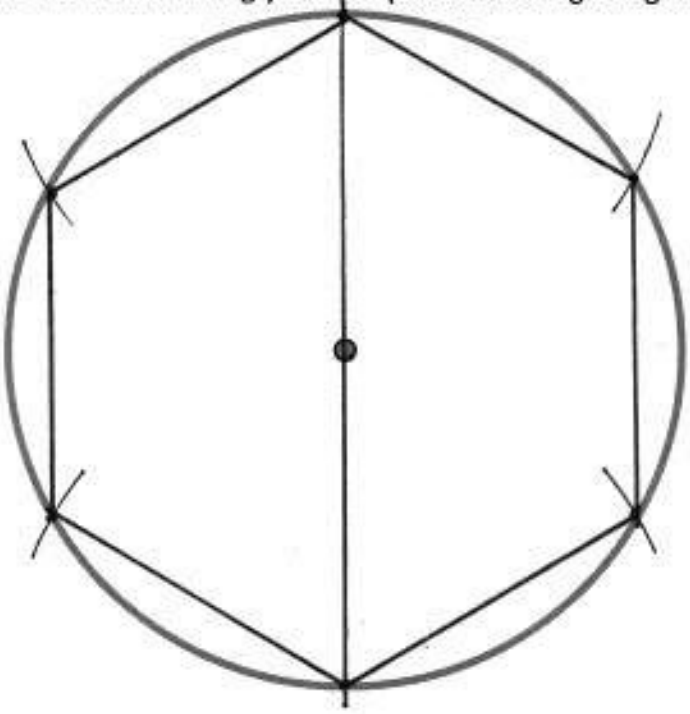


Section 1.3

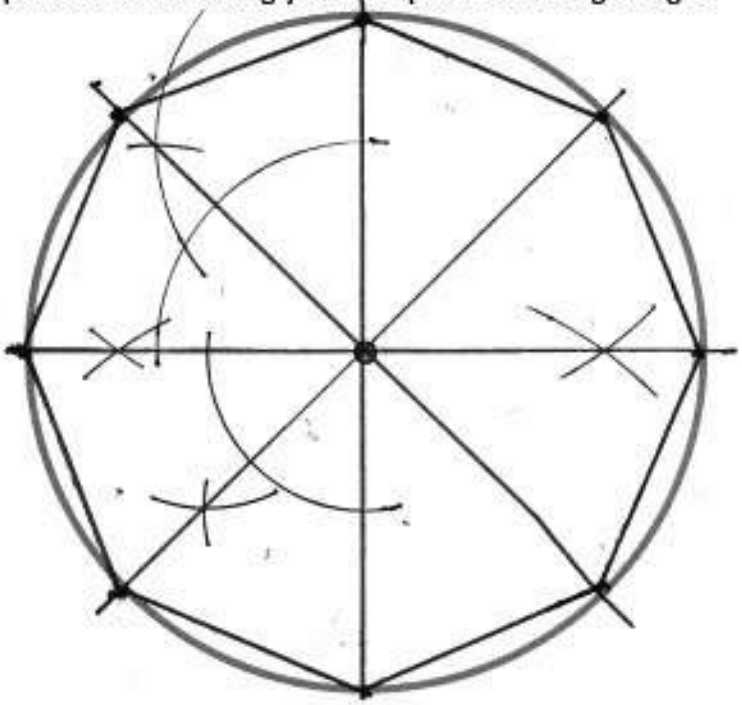
G.CO.13 WORKSHEET #1 – PATTERSON 3

5. Construct the requested inscribed polygons.

a) Construct a regular hexagon inscribed in the provided circle using your compass and straightedge.



b) Construct a regular octagon inscribed in the provided circle using your compass and straightedge.



Hint: The central angle is 45°, half of the square's central angle of 90°.

Section 1.3