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## HOMEWORK PACKET \#2: LESSONS 7-9

1. Use a compass and straightedge to construct an inscribed square in circle $T$ shown below. [Leave all construction marks.]

2. The diagram below shows circle $O$ with diameter $\overline{A B}$. Using a compass and straightedge, construct a square that is inscribed in circle $O$. [Leave all construction marks.]

(B) Determine the measure of the arc intercepted by two adjacent sides of the constructed square. $\qquad$ Explain your reasoning: $\qquad$
3. Using a compass and straightedge, construct a rectangle inscribed in circle $O$. [Leave all construction marks.]

4. Using a compass and straightedge, construct rectangle inscribed in circle $O$ below. Label it $A B C D$. [Leave all construction marks.]

5. Using a compass and straightedge, construct the median to BC . Label it M. [Leave all construction marks.]

6. Using a compass and straightedge, construct the altitude to $B C$. Label it $T$. [Leave all construction marks.]

7. Using a compass and straightedge, construct the median to LH. Label it M. [Leave all construction marks.]

8. Using a compass and straightedge, construct the altitude to FH. Label it A. [Leave all construction marks.]

9. Construct the given types of angles below.
a) $60^{\circ}$ angle:
b) $30^{\circ}$ angle:
c) $90^{\circ}$ angle:
d) $45^{\circ}$ angle:
10. Construct a $30^{\circ}-60^{\circ}-90^{\circ}$ triangle.
11. Determine whether the relationships is INSCRIBED or CIRCUMSCRIBED.
a) The triangle is $\qquad$ .
b) The hexagon is $\qquad$

c) The circle is $\qquad$

12. Using a compass and straightedge, construct the incenter of triangle $A B C$. Label it $P$. [Leave all construction marks.]

13. Using a compass and straightedge, construct the circumcenter of triangle FLH. Label it $P$. [Leave all construction marks.]

