

Name: _____

Date: _____

1. $A = 204, P = 66$

2. 4

3. $KO = 4, JN = 6, JK = 4\sqrt{3}, KN = 2\sqrt{3}$

4. Let M be the midpoint of \overline{BC} . $BM = \frac{10}{2} = 5$. Use Pythagorean Theorem:

$$5^2 + (AM)^2 = 13^2$$

$$25 + (AM)^2 = 169$$

$$(AM)^2 = 144$$

$$AM = 12$$

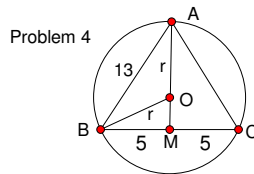
Now since $OA = r$, $OM = 12 - r$. Use Pythagorean Theorem again:

$$5^2 + (12 - r)^2 = r^2$$

$$25 + 144 - 24r + r^2 = r^2$$

$$169 = 24r$$

$$r = \frac{169}{24}$$



5. 5

6. 10

7. $2\sqrt{10}$

8. 60

9. 3

10. $OI = 3\sqrt{2} - 3, A = \frac{9\pi}{4}$