The Unit Circle

point	x	y
Q	½	0
R	0	½
S	-½	0
T	0	-½
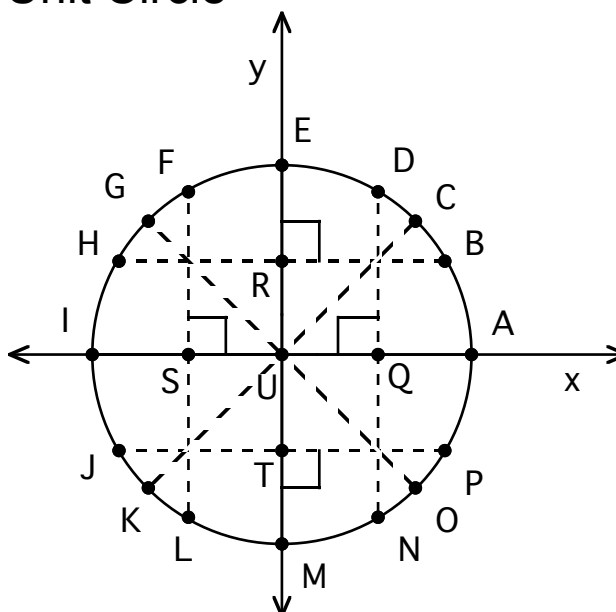
point	x	y	θ°	θ rad.
A	1	0	0°	0
B				
C				
D				
E	0	1		
F				
G				
H				
I	−1	0		
J				
K				
L				
M	0	−1		
N				
O				
P				

$$\theta = \angle AU(\text{table point});\ \ 0 \le \theta < 2\pi = 360°$$

Honors Precalculus Classwork

Answer the questions below in sequence. Complete the table ONLY as you get clues from your answers. Work in small groups (1-4), checking each other's work; each submits.

Name: _____

Period: _____ Date: _____

1. Which points on circle *U* have the same *x*-coordinate as point *Q*?   As point *S*?

2. Which points on circle *U* have the same *y*-coordinate as point *R*?   As point *T*?

3. *UQ* _____ *QA*. [< , = , >]

4. What is the relationship of $\overline{DQ}$ to $\overline{UA}$?

5. What kind of Δ is Δ*UDA*?

6. *UD* _____ *DA*. [< , = , >]

7. $\overline{UD}$ and $\overline{UA}$ are _____ of circle *U*.

8. *UD* _____ *DA* _____ *UA*. [< , = , >]

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9. What kind of Δ is Δ*UDA*?

10. What is the degree measure of ∠*AUD*?

11. What are the lengths of segments *UD*, *UQ*, and *QD*?

12. What are the (*x*, *y*) coordinates of point *D*?

13. What's the *x*-coordinate of *N* and the *y*-coordinate of *F*?

14. *UR* ____ *RE*. [< , = , >]

15. What is the relationship of $\overline{BR}$ to $\overline{UE}$?

16. What kind of Δ is Δ*UBE*?

17. *UB* ____ *BE*. [< , = , >]

18. $\overline{UB}$ and $\overline{UE}$ are _____ of circle *U*.

19. *UB* ____ *BE* ____ *UE*. [< , = , >]

20. What kind of Δ is Δ*UBE*?

21. What are the degree measures of ∠*BUE* and ∠*AUB*?

22. What are the lengths of segments *UB*, *UR*, and *RB*?

23. What are the (*x*, *y*) coordinates of point *B*?

24. What are the *x*-coordinate of *P* and the *y*-coordinate of *H*?

25. If diagonal *CK* is drawn through the intersection of segments *BR* and *DQ*, what's the degree measure of ∠*AUC*?

26. What are the (*x*, *y*) coordinates of point *C*?

27. Reflect points in the drawing to complete the table.