**Precalculus BC Polar Graphs** Name:

**Rose Investigation: **

1. What is the maximum value of *r*?
2. What does *n* do? Consider odd and even cases.
3. What happens if we replace cos with sin?
4. What is the minimum domain needed to complete the rose? Consider odd and even cases.
5. On which axes do the petals occur? Consider odd and even cases for both sin and cos.
6. What if *a* is negative? Consider odd and even cases.
7. What symmetries do you see? (There is a new one here).
8. What does the *k* do: ?
9. Can you make a 6-petaled rose?