# Q3 Cumulative

1. Eliminate the parameter : and
2. Eliminate the parameter : and
3. Convert the polar coordinate to rectangular coordinates
4. Convert this equation to polar coordinates:
5. Convert this equation to rectangular coordinates:
6. Which of the following is the graph of
7. A baseball pitcher throws a baseball with an initial speed of 138 feet per second at an angle of 20° to the horizontal. The ball leaves the pitcher’s hand at a height of 4 feet above the ground. Write the equations of motion
8. Let and and find
9. Given , find
10. Given , find a unit vector in the direction of
11. Which vector is perpendicular to
12. Which vector is parallel to
13. What is the angle between
14. If vector has magnitude 12 and makes an angle of with the positive axis, find the components of and write as .
15. If vector has length 20 and makes a angle with the positive axis, find the and components of .
16. Write the complex number in polar form.
17. Divide by , and express your answer in the form .
18. Simplify the product .
19. Solve the equation for and express your answers in rectangular form.
20. If is one root of a quadratic equation with real coefficients, what is ?
21. If , find all values of in polar form.
22. Factor into a product of two binomials.