

## MAC 1114 EXAM IV TOPICS

- 1.3 ① Adding, subtracting, multiplying and dividing complex numbers in rectangular form, conjugates, powers of  $i$ . (15)
- 1.3 ② Solving quadratic equations with non-real complex solutions (5)
- 10.3 ③ Converting complex numbers from rectangular to polar form, and vice versa. Multiplication and division in polar form. Using the Binomial Theorem. (15)
- 10.3 ④ De Moivre's Theorem;  $n^{\text{th}}$  root Theorem (15)
- 11.2 ⑤ Parabolas, focus, directrix (10)
- 11.3 ⑥ Ellipses, foci, major and minor axes. (10)
- 11.4 ⑦ Hyperbolas, asymptotes, foci. (15)
- 11.2-11.4 ⑧ Translated conics, including completing the square. (Here the vertex, or the center, is not at the origin.) (15)

Point values are in parentheses.