Honors Trigonometry Name:_____
Chapter 11 Review (2)

1. Transform $r = \dfrac{8}{3 - 5\cos\theta}$ to a rectangular equation and eliminate any radicals

2. Transform $r = \sin 2\theta$ to a rectangular equation and eliminate any radicals

3. Transform $x^2 + y^2 - 6x = 0$ to polar coordinates and express r in terms of θ

4. Perform the indicated operations and express the answers in form a + bi.

   a. $(2cis52°)(5cis38°)$

   b. $(51cis198°) \div (17\cos 228°)$

   c. $(2cis27°)^5$

   d. $(8cis120°)^{\frac{1}{3}}$

5. Evaluate $(1+i)^3$

6. Find all the solutions to the equation $x^6 = 1 + i$

Answer Sheet
Honors Trigonometry
Chapter 11 Review (2)

1. $16x^2 - 9y^2 + 80x + 64 = 0$
2. $(x^2 + y^2)^3 = 4x^2y^2$
3. $r = 6\cos\theta$
4. a. $10i$ b. $\frac{3\sqrt{3}}{2} - \frac{3}{2}i$

   c. $-16\sqrt{2} + 16\sqrt{2}i$ d. $1.532 + 1.286i$, $-1.879 + 0.6840i$, $0.3473 - 1.970i$
5. $-2 + 2i$

6. $\left\{\begin{matrix} .991 + .131i \\ .383 + .924i \\ -.609 + .793i \\ -.991 - .131i \\ -.383 - .924i \\ .609 - .793i \end{matrix}\right\}$