COMPLEX NUMBERS

TEXT: 9.3

LAST NAME	FIRST NAME	DATE

1 (5 points)**.** Simplify and rewrite as a complex number in standard form:

(a) $\sqrt{-125}$

(b) $(17-6i)-(4+4i)$

(c) $-2i(6-5i)$

(d) $(3i-9)(8+11i)$

(e) $(2-i)^3$

2 (4 points)**.** Simplify and rewrite as a complex number in standard form:

(a) $\dfrac{10+2i}{2+3i}$

(b) $\dfrac{-1-7i}{1-3i}$

3 (2 points). Solve the equation by finding all complex solutions:

$$x^2 - 10x + 26 = 0$$

4 (1 point). Make up a quadratic equation exercise similar to the one above with the solution set $\{2+3i, 2-3i\}$.

5 (1 point). How many distinct complex solutions does this equation have?

$$x(x-1)^2(x^2+1)(x+3) = 0$$