

These are alleged answers. For each error herein, you get extra-credit points for being the first to report it by e-mail.

1 Let  $w = 2 - 7i$  and  $z = 7 + 2i$ . Write the following in standard  $a + bi$  form:

(a)  $w + z = 9 - 5i$

(b)  $wz = 28 - 45i$

(c)  $w\bar{w} = 53$

(d)  $w + \bar{w} = 4$

(e)  $w - \bar{w} = -14i$

(f)  $\frac{w}{z} = -i$

2 To solve  $x^2 - 4x + 40 = 0$  via the quadratic formula, note first that

$$b^2 - 4ac = (-4)^2 - 4(1)(40) = 16 - 160 = -144 = -12^2,$$

so that

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{4 \pm 12i}{2} = 2 \pm 6i$$