

NAME: _____ Score _____/10

Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION**

1. The complex component of the complex number $5 - 6i$ is _____.
2. If $(3x-2) + bi = 1 + (y+4)i$, then $x =$ _____ and $y =$ _____.
3. Compute the sum of the two complex numbers
 $(3 - xi) + (7 + \sqrt{5}i) =$ _____.
4. The opposite of a complex number $3 + 4i$ is _____.
5. The difference $(a + bi) - (c + di)$ is defined to be $(a + bi) +$ (_____)
6. Compute the product $(2 + 3i)(-3 + 5i)$
7. The norm of the complex number $5 - 2i$ is _____
8. The conjugate of $5 - 2i$ is _____
9. Write the multiplicative inverse of $5 - 2i$
10. Compute the quotient $(7 - 3i) \div (5 - 2i)$ (**Hint: Look at Problem 9**)