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Date _____
Pre Calculus

Graphing Complex Numbers

For the following pairs of complex numbers:

a) **graph each complex number**
b) **graph its resultant**
c) **find the magnitude of the resultant**

1. $(5 + 2i)$ and $(4 - 3i)$

(5,2) (4,-3)

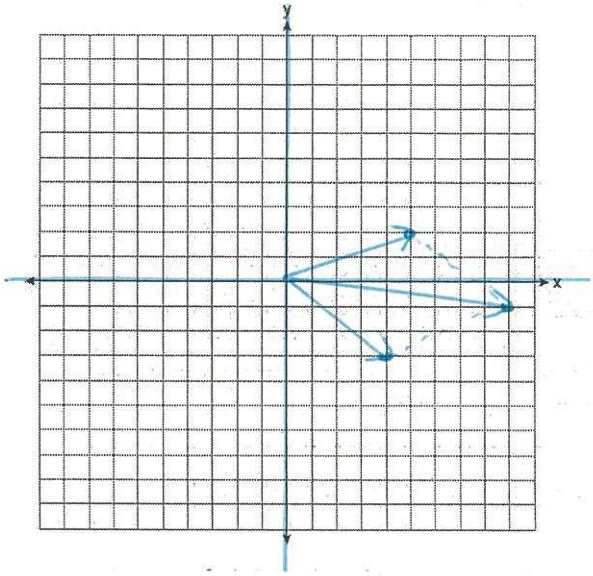
$5+2i+4-3i = 9-i$

(9,-1)

$\sqrt{9^2+1^2}$

$\sqrt{81+1}$

$\sqrt{82}$



2. $(-2 + 3i)$ and $(5 - 7i)$

(-2,3) (5,-7)

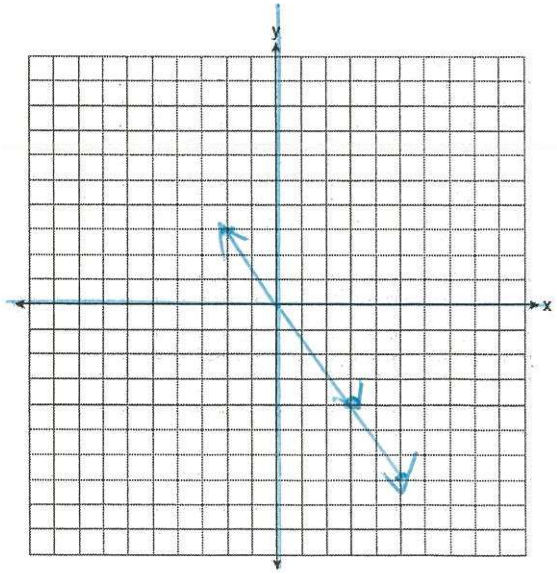
$-2+3i+5-7i = 3-4i$

$\sqrt{3^2+(-4)^2}$

$\sqrt{9+16}$

$\sqrt{25}$

5



3. $(-2 + \sqrt{-49})$ and $(3 - \sqrt{-16})$

$(-2+7i)$ $(3-4i)$

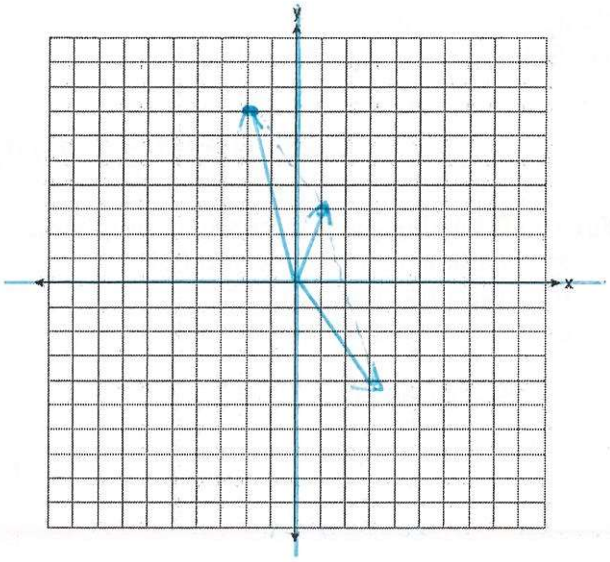
$(-2,7)$ $(3,-4)$

$-2+7i+3-4i = 1+3i$

$\sqrt{1^2+3^2}$

$\sqrt{1+9}$

$\sqrt{10}$



4. $(7 - 4i)$ and $(-5 + 7i)$

$(7,-4)$ $(-5,7)$

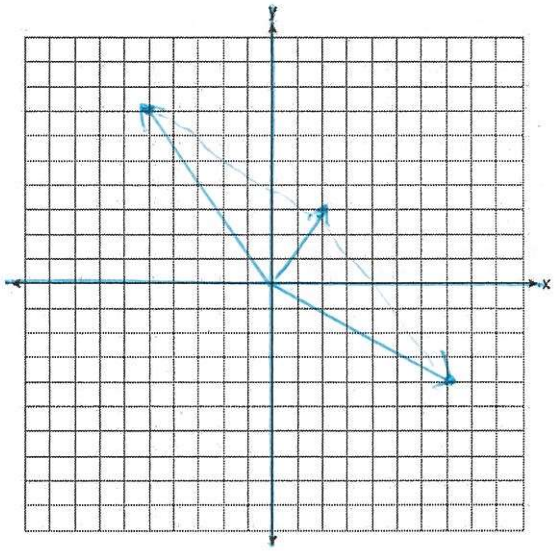
$7-4i+-5+7i$

$2+3i$

$\sqrt{2^2+3^2}$

$\sqrt{4+9}$

$\sqrt{13}$



5. $(6-\sqrt{-16})$ and $(-2+\sqrt{-64})$

$(6-4i)\ (-2+8i)$

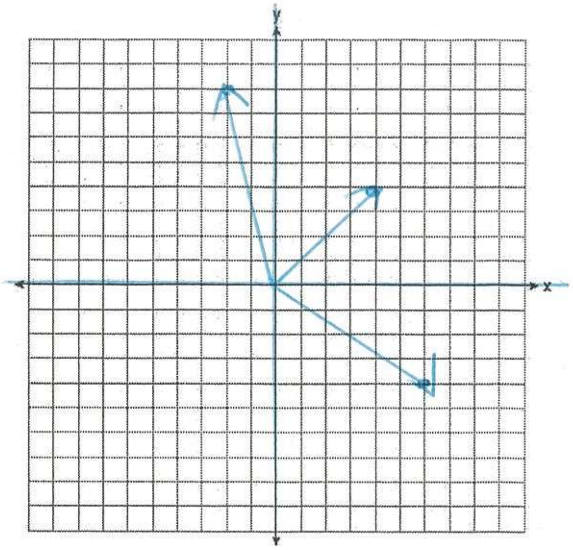
$(6,-4)\ (-2,8)$

$6-4i+-2+8i=4+4i$

$\sqrt{4^2+4^2}$

$\sqrt{16+16}$

$\sqrt{32}$



6. $(4-5i)$ and $(-6+8i)$

$(4,-5)\ (-6,8)$

$4-5i+-6+8i$

$-2+3i$

$\sqrt{(-2)^2+(3)^2}$

$\sqrt{4+9}$

$\sqrt{13}$