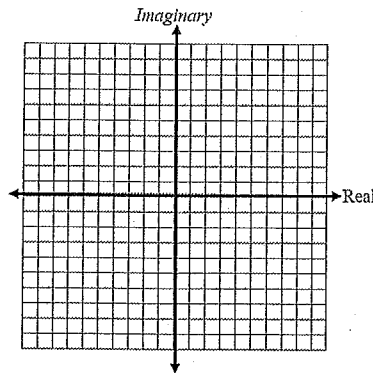


Accelerated Precalculus  
7.04-7.05 Complex Numbers Practice

SHOW ALL WORK!!

1. Plot  $z = -3 - 2i$  and find its modulus.

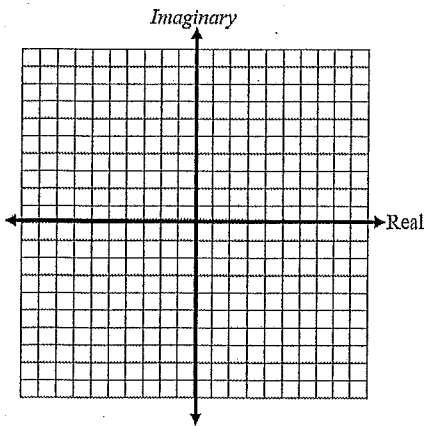


2. Find the distance between the points  $z_1 = 1 - 4i$  and  $z_2 = 3 + 6i$  in the complex plane.

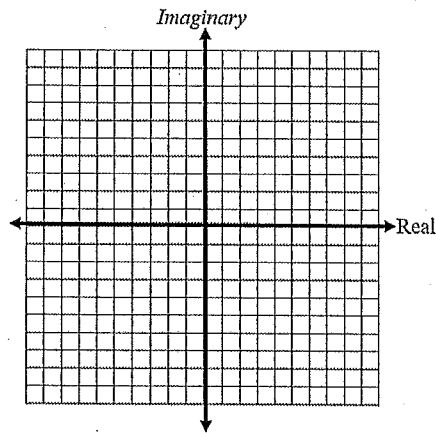
3. Find the midpoint of the segment connecting  $4 - 11i$ ,  $1 + 7i$  in the complex plane.

Evaluate each sum or difference geometrically. Then, verify your answers algebraically.

4.  $(2 + 4i) + (8 - 5i)$



5.  $(-2 - 7i) - (1 - 1i)$



Accelerated Precalculus  
7.04-7.05 Complex Numbers Practice

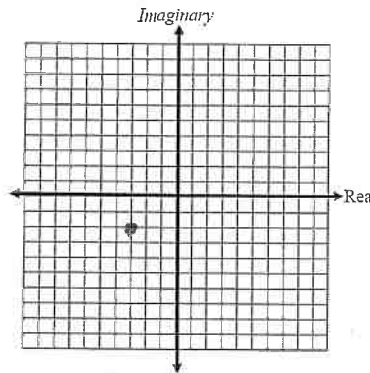
Key

SHOW ALL WORK!!

$$|z| = \sqrt{a^2 + b^2}$$

1. Plot  $z = -3 - 2i$  and find its modulus.

$$|-3 - 2i| = \sqrt{3^2 + 2^2} = \sqrt{13}$$



$$|z_1 - z_2|$$

2. Find the distance between the points  $z_1 = 1 - 4i$  and  $z_2 = 3 + 6i$  in the complex plane.

$$|1 - 3 + (-4 - 6)i|$$

$$|-2 - 10i| = \sqrt{4 + 100} = \sqrt{104} = 2\sqrt{26}$$

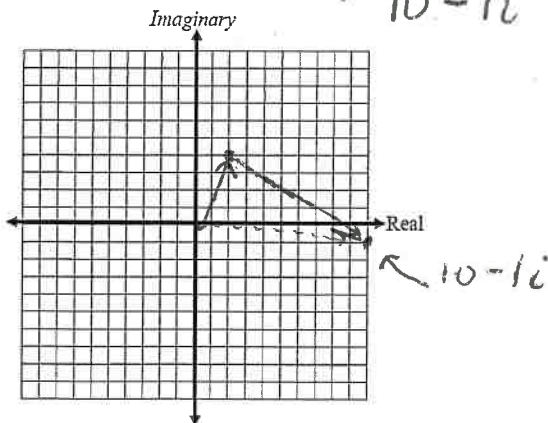
3. Find the midpoint of the segment connecting  $4 - 11i$ ,  $1 + 7i$  in the complex plane.

$$\frac{4+1}{2} + \frac{-11+7i}{2} \rightarrow \frac{5}{2} - \frac{16}{2}i \rightarrow \frac{5}{2} - 8i$$

$$\frac{z_1 + z_2}{2}$$

Evaluate each sum or difference geometrically. Then, verify your answers algebraically.

4.  $(2 + 4i) + (8 - 5i) \rightarrow 10 - 1i$



5.  $(-2 - 7i) - (1 - 1i)$

