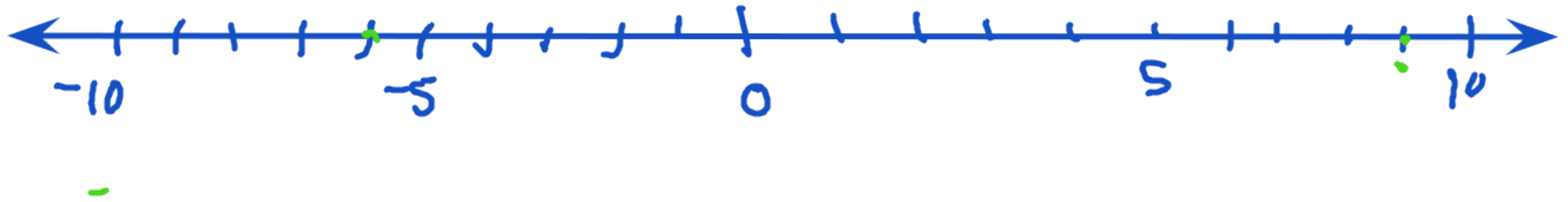
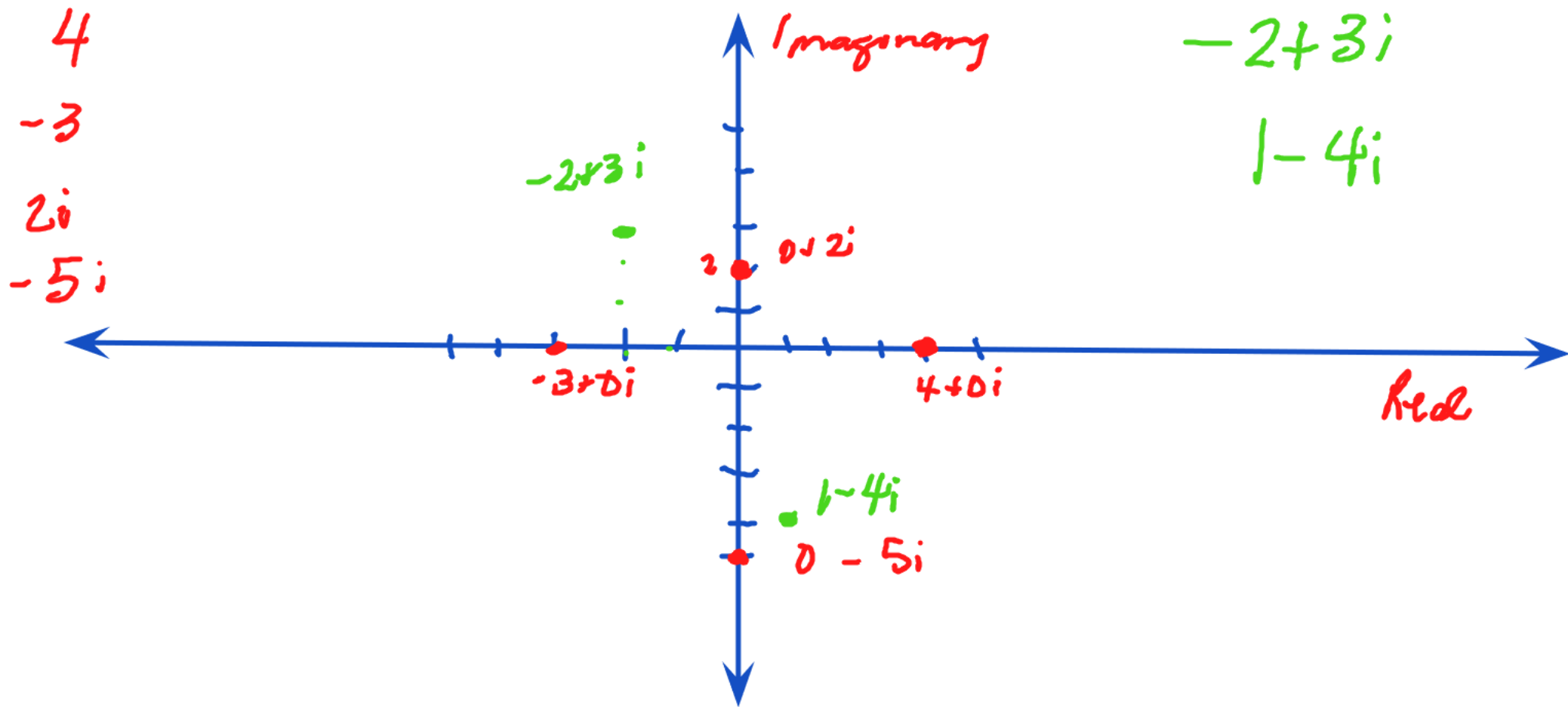


# Complex Numbers

$$a+bi$$

$$3+6i$$

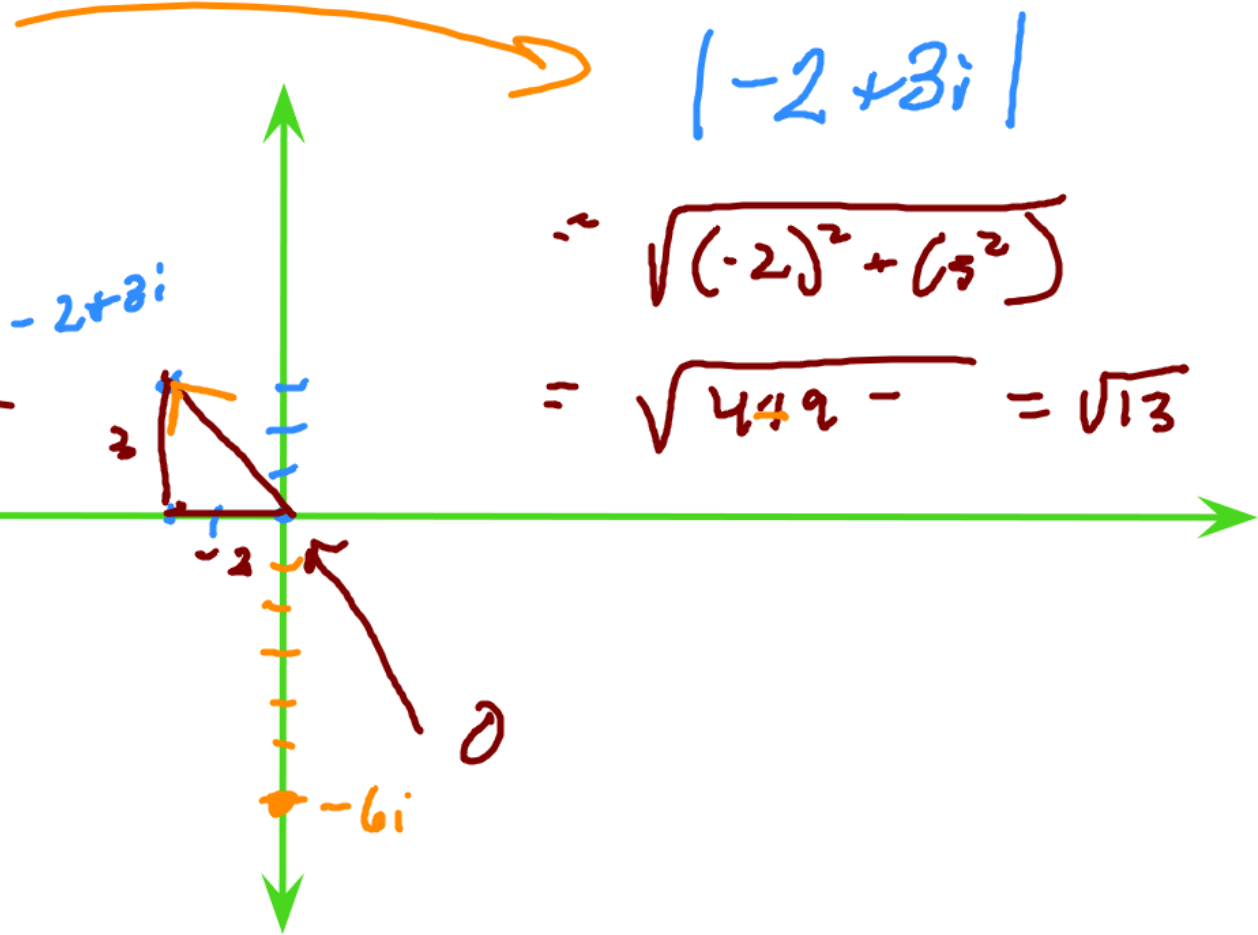




# Absolute Value

- distance to  $\emptyset$ .

$$|-6i| = 6$$



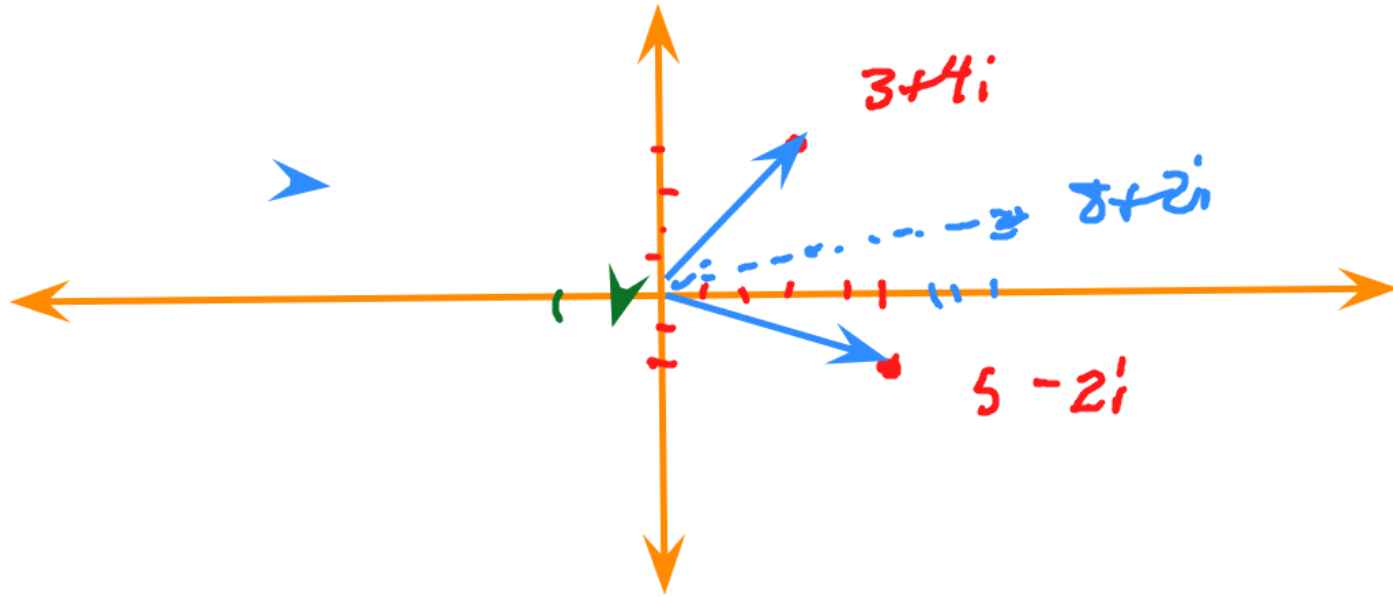
$$|-2+3i|$$

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

$$= \sqrt{4+9} = \sqrt{13}$$

# ADDING COMPLEX NUMBERS

$$(3+4i) + (5-2i) = \underline{8+2i}$$



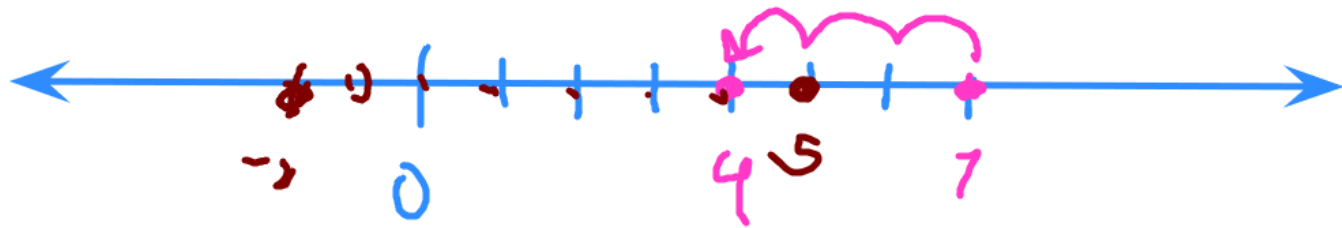
# SUBTRACTING

$$7 - 4 = 3$$

$$5 - (-2) = 7$$

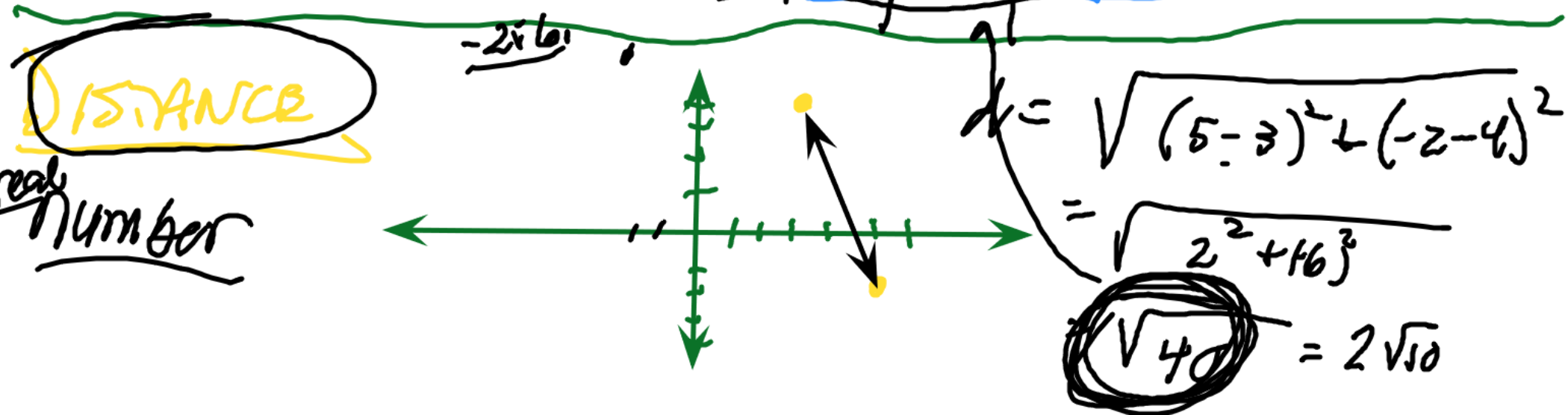
$$-2 - 5 = |-7| = 7$$

"Difference" = "Distance"



# Subtraction of Complex Numbers

$$(3+4i) - (5-2i) = (3-5) + (4i - (-2i))$$
$$= -2 + 6i$$



6.5A p443 (9-42) x3

6.5B p443 same +1, 51-54 \*

~~2)~~

29)

$$u = 3i + 4j$$

$$v = -7i + 5j$$

$$\underline{\underline{\cos \theta}} = \frac{u \cdot v}{\|u\| \cdot \|v\|}$$

$$= \frac{(-21 + 20)}{\sqrt{3^2 + 4^2} \cdot \sqrt{(-7)^2 + 5^2}}$$

$49 + 25$

$5 \cdot \sqrt{74}$

$$= \boxed{\frac{-1}{5\sqrt{74}}} = -0,023$$

$$\underline{\underline{\theta = 91,38^\circ}}$$

