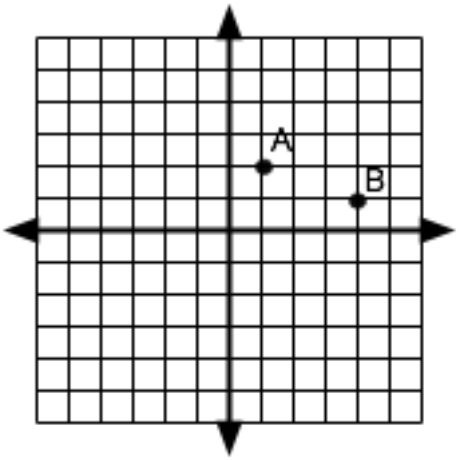
Precalc. BC 2-Dimensional Numbers – Addition Name

Perform the indicated operations below.

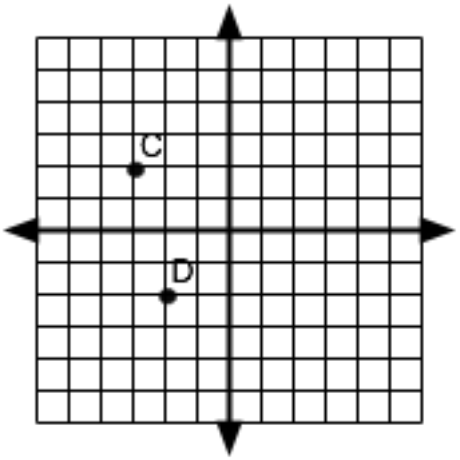
1. Find and label: (A+B) and (B+A)
   a) Are these the same?

   b) What property is this?

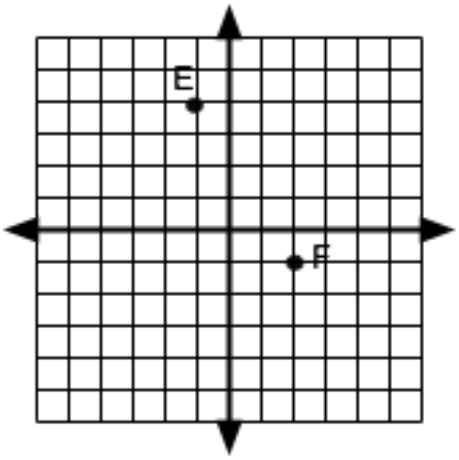


2. Find and label: -C and -D
   a) Now find/label (C - D) and (D – C)
   note: C - D = C + (-D)

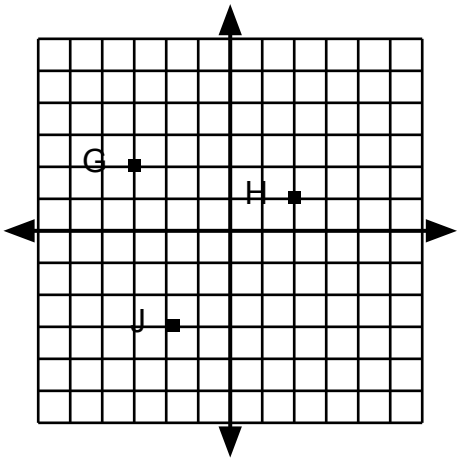
   b) How are these related?



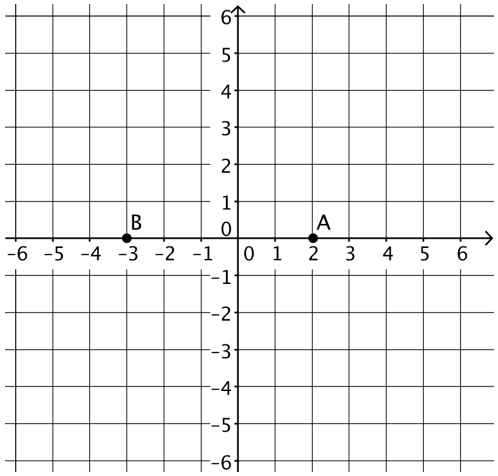
3. Find and label: (E + F) and (E - F)
   a) What is the sum of these two?
   b) What is the difference?
   (E + F) – (E – F)



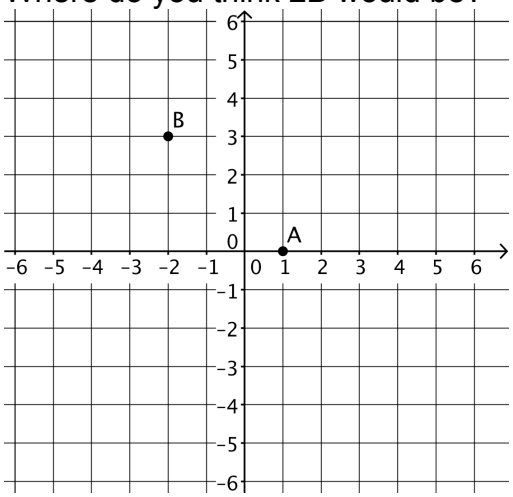
4. Demonstrate the associative property: G+(H+J) = (G+H) + J



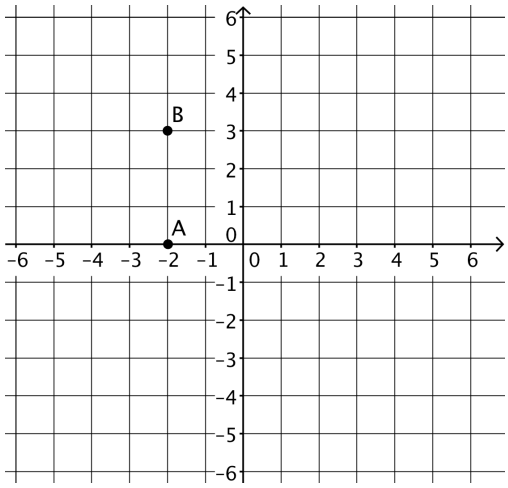
5. Find A x B and label it P. These are both 1 dimensional numbers so this should easy! Make note of the relative position and size of P.



6. Now do the same thing with the new points. Notice that one of the points is the multiplicative identity! Where do you think 2B would be?



7. Same thing again! One of the numbers is still a 1 dimensional number.



8. Now the challenge level. Look back at your previous examples and think geometrically! What transformations can you identify? Try to be consistent.