



Practice Problems

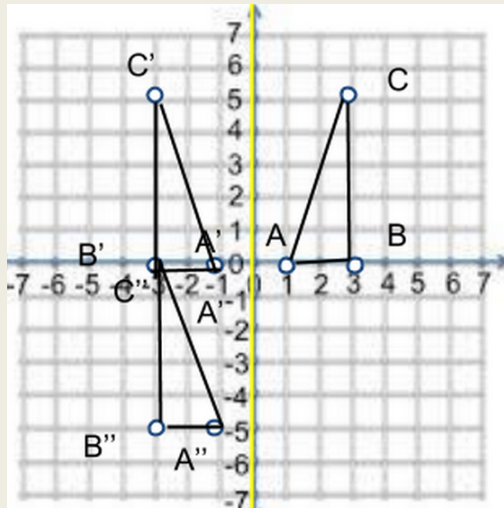
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Problem One

Problem 1- Triangle ABC has points A(1,0) B(3,0) and C(3,5). If it were reflected across the y axis, and then translated along the vector $\langle 0,-5 \rangle$, what would the coordinates of C'' be?

Solving- Since we know the coordinates, and where the y axis is, we can reflect the triangle. As a rule, reflection across the y axis means (x,y) changes to $(-x,y)$. If A is $(1,0)$, then A' is $(-1,0)$ after reflection. If B is $(3,0)$, then B' is $(-3,0)$ as well. If C is at $(3,5)$, then C' is $(-3,5)$. Using a vector notation means $\langle e,f \rangle$, and $(x+e, y+f)$. In this case, $e = 0$, and $f = -5$, so $(x+0, y-5)$. We only need C' for this, which is $(-3,5)$. So, $(-3+0, 5-5)$ is C''. In other words, C'' is $(-3,0)$.



Problem 2

Problem 2- Pat builds models of WWII planes. If the original wingspan of a Grumman FF was 34' 6", and his model is 3' 10", what is the scale factor for this reduction?

Solving- First, we should make the values of wingspans into inches. $34 \times 12 = 408$, and $408 + 6 = 414$. The original wingspan was 414". $3 \times 12 = 36$, and $36 + 10 = 46$. The model has a wingspan of 46". We can new over old with the wingspan to find the scale factor. Essentially, $46/414$. Simplified, we have a scale factor of $1/9$.



FF / SF "Fifi" N.d. Wikipedia. N.p.: n.p., n.d. N. pag. Print.