

1) 15 is what % of 30?
 $15 = x \cdot 30$
 $x = 50\%$

2) what # is 50% of 100?
 $x = .50 \cdot 100$
 $x = 50$

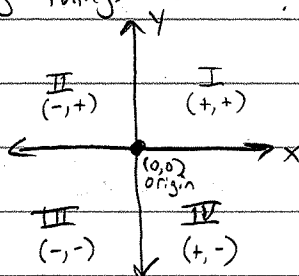
3) $M = 2R + Gh$

$h = \frac{M - 2R}{G}$

4.1 b Transformations

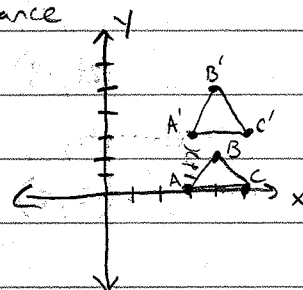
* Moving things around - vert, horiz, shrink, stretch

Refresh:



Translation - moving every point same distance

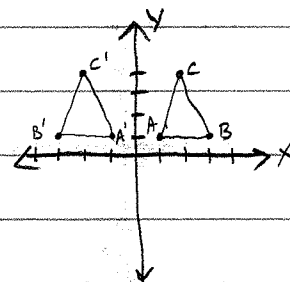
Start	Image	
A (3,0)	→ A' (3,3)	} are +3 to y coord
B (4,2)	→ B' (4,5)	
C (5,0)	→ C' (5,3)	



Transformation: $(x,y) \rightarrow (x,y+3)$... So + or - a # from x or y

Reflection - flips a figure

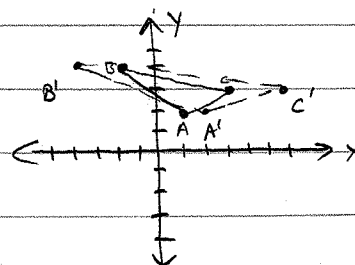
Start	Image	
A (1,1)	→ (-1,-1)	} Mult x by -1
B (3,1)	→ (-3,1)	
C (2,4)	→ (-2,-4)	



Transform: $(x,y) \rightarrow (-x,y)$... So * or ÷ x or y by -1

Stretch or Shrink - Makes shape taller or shorter

Start	Image
A (1,2)	→ (2,2)
B (-2,4)	→ (-4,4)
C (3,3)	→ (6,3)



Transform: $(x,y) \rightarrow (2x,y)$

P214:
3-6, 10-13

Example

Write the transformation

Start	Image	
A (6, 0)	\rightarrow A' (3, 0)	} How did the x's change? = 2 or $\times \frac{1}{2}$
B (5, 3)	\rightarrow B' (2.5, 3)	
C (8, -1)	\rightarrow C' (4, -1)	} How did the y's change? $\times -1$
D (-4, -2)	\rightarrow D' (-2, 2)	

$$(x, y) \rightarrow \left(\frac{x}{2}, -y\right)$$