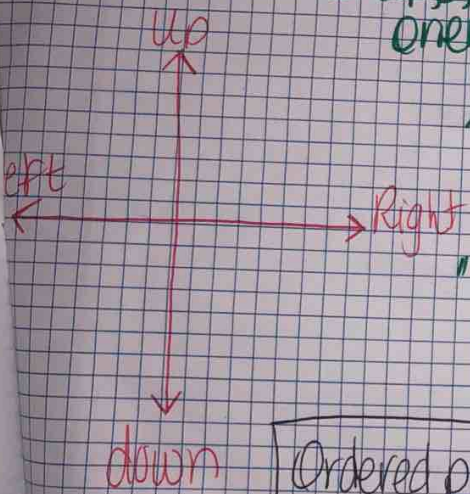


# Translations

SLIDE

Rigid figures stays the same shape, size & orientation



"x" moves left/right  
 - +  
 "y" moves up/down

Ordered pairs  
 $(x, y) \rightarrow$

$(x, y) \rightarrow (x-3, y+4)$   
 Translate  $\Delta JKL$  left 3 units and up 4 units.

$(x, y) \rightarrow (x+5, y+3)$   
 Translate  $\Delta ABC$  right 5 units and up 3 units.

$(x, y) \rightarrow (x+6, y-2)$   
 right 6 and down 2

$PQRS \rightarrow P'Q'R'S'$   
 $P(-2, 3) \rightarrow P'(4, 1)$   
 $Q(-2, 1) \rightarrow Q'(4, -1)$   
 $R(3, 1) \rightarrow R'(3, -1)$   
 $S(-3, 5) \rightarrow S'(3, 3)$

Describe a translation that maps  $\Delta QRS$  to  $\Delta Q'R'S'$   
 right 5  
 down 4  
 $(x, y) \rightarrow (x+5, y-4)$

Geometry

Name: \_\_\_\_\_

Transformations of Figures – Translations Summary

Directions: Complete the missing column using information in the other corresponding columns.

TRANSFORMATIONS	PRE-IMAGE COORDINATES	IMAGE COORDINATES																
<p><b>Words:</b> Translation right 5 units Translation down 2 units</p> <p><b>Ordered Pair Rule:</b> <math>(x,y) \rightarrow (x+5, y-2)</math></p>	<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-2 +5</td> <td>1 -2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>-3</td> </tr> </tbody> </table>	x	y	-2 +5	1 -2	1	2	1	-3	<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>-1</td> </tr> <tr> <td>6</td> <td>0</td> </tr> <tr> <td>6</td> <td>-5</td> </tr> </tbody> </table>	x	y	3	-1	6	0	6	-5
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