

TEKS 2A.4.B



LESSON
1-8

Practice B

Exploring Transformations

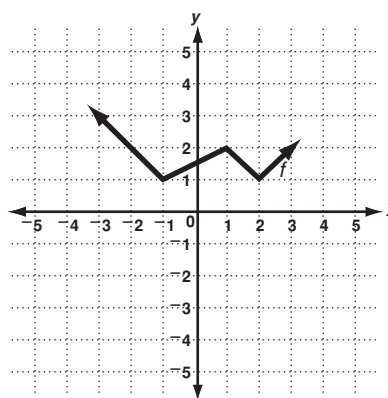
Perform the given translation on the point (2, 5) and give the coordinates of the translated point.

1. left 3 units
2. down 6 units
3. right 4 units, up 2 units

Use the table to perform each transformation of $y = f(x)$. Use the same coordinate plane as the original function.

4. translation left 1 unit, down 5 units

	x	y	
	-3	3	
	-1	1	
	1	2	
	2	1	
	3	2	



5. vertical stretch factor of $\frac{3}{2}$

x	y	
-3	3	
-1	1	
1	2	
2	1	
3	2	

6. horizontal compression factor of $\frac{1}{2}$

	x	y
	-3	3
	-1	1
	1	2
	2	1
	3	2

7. reflection across x-axis

x	y	
-3	3	
-1	1	
1	2	
2	1	
3	2	

Solve.

8. George has a goal for the number of computers he wants to sell each month for the next 6 months at his computer store. He draws a graph to show his projected profits for that period. Then he decides to discount the prices by 10%. How will this affect his profits? Identify the transformation to his graph and describe how to find the ordered pairs for the transformation.

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Exploring Transformations

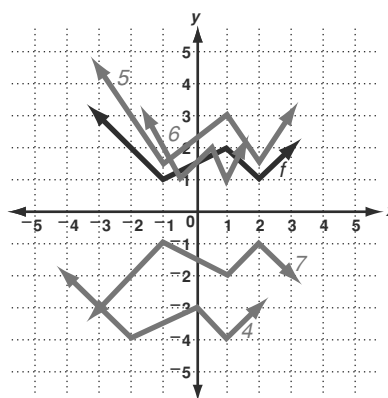
Perform the given translation on the point (2, 5) and give the coordinates of the translated point.

1. left 3 units 2. down 6 units 3. right 4 units, up 2 units
- _____ **(-1, 5)** _____ **(2, -1)** _____ **(6, 7)**

Use the table to perform each transformation of $y = f(x)$. Use the same coordinate plane as the original function.

4. translation left 1 unit, down 5 units

$x - 1$	x	y	$y - 5$
-4	-3	3	-2
-2	-1	1	-4
0	1	2	-3
1	2	1	-4
2	3	2	-3



5. vertical stretch factor of $\frac{3}{2}$

x	y	$\frac{3}{2}y$
-3	3	$\frac{9}{2}$
-1	1	$\frac{3}{2}$
1	2	3
2	1	$\frac{3}{2}$
3	2	3

6. horizontal compression factor of $\frac{1}{2}$

$\frac{1}{2}x$	x	y
$-\frac{3}{2}$	-3	3
$-\frac{1}{2}$	-1	1
$\frac{1}{2}$	1	2
1	2	1
$\frac{3}{2}$	3	2

7. reflection across x-axis

x	y	$-y$
-3	3	-3
-1	1	-1
1	2	-2
2	1	-1
3	2	-2

Solve.

8. George has a goal for the number of computers he wants to sell each month for the next 6 months at his computer store. He draws a graph to show his projected profits for that period. Then he decides to discount the prices by 10%. How will this affect his profits? Identify the transformation to his graph and describe how to find the ordered pairs for the transformation.

Profits are reduced by 10%; vertical compression; $(x, 0.9y)$.