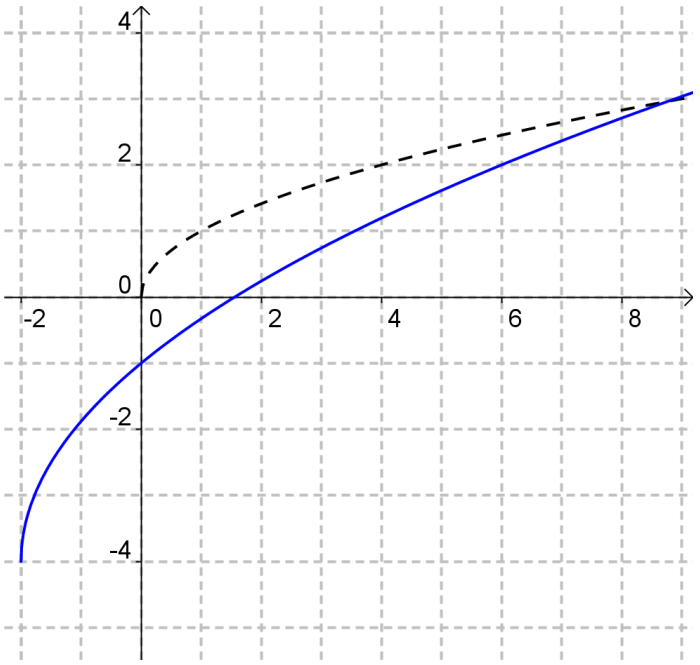
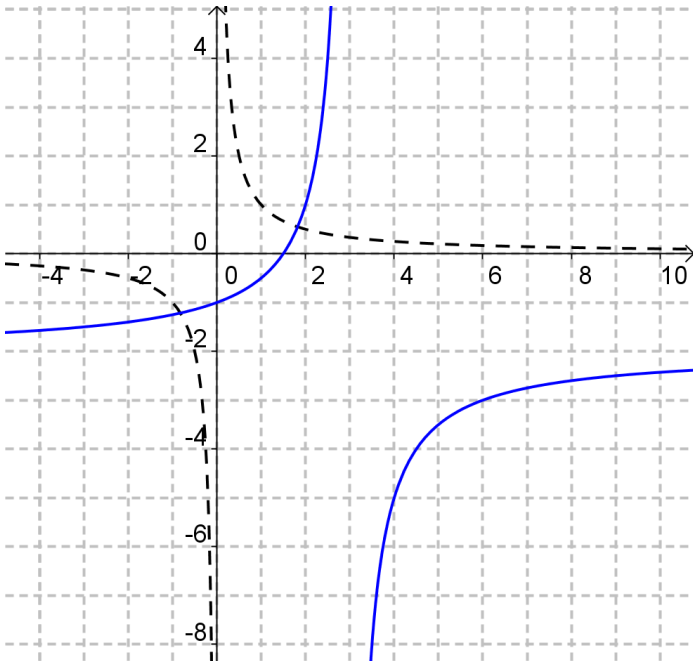
State the transformations and apply them to the provided parent relation (dotted line):



$$y=3\sqrt{\frac{1}{2}(x+2)}-4 \text{ , or } y=3f\left[\frac{1}{2}(x+2)\right]-4$$

1. vertical scaling by 3 or vertical stretch by 3
2. horizontal scaling by 2 or horizontal stretch by 2
3. shift left by 2
4. shift down by 4

$$(x,y)\rightarrow(2x-2,3y-4)$$

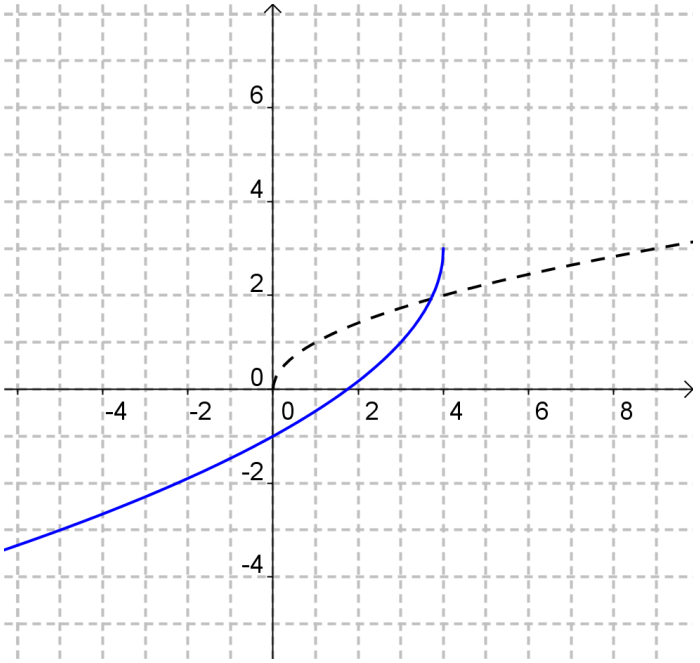


$$y=-\frac{3}{x-3}-2 \text{ , or } y=-3f(x-3)-2$$

1. vertical reflection in the x-axis
2. vertical scaling by 3 or vertical stretch by 3
3. shift right by 3
4. shift down by 2

$$(x,y)\rightarrow(x+3,-3y-2)$$

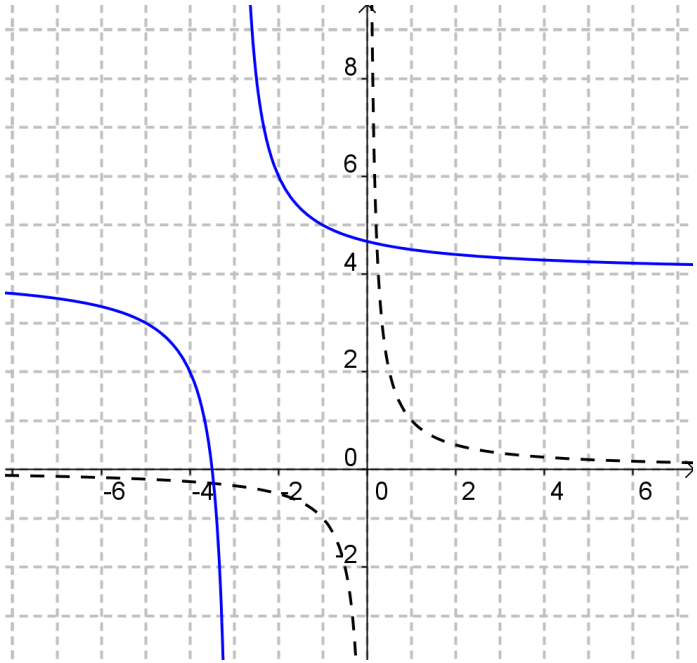
State the transformations and apply them to the provided parent relation (dotted line):



$y=-2\sqrt{-(x-4)}+3$, or $y=-2f[-(x-4)]+3$

1. vertical reflection in the y-axis
2. vertical scaling of 2 or vertical stretch by 2
3. horizontal reflection about the y-axis
4. shift right by 4
5. shift up by 3

$$(x, y)\rightarrow(-x+4,-2y+3)$$

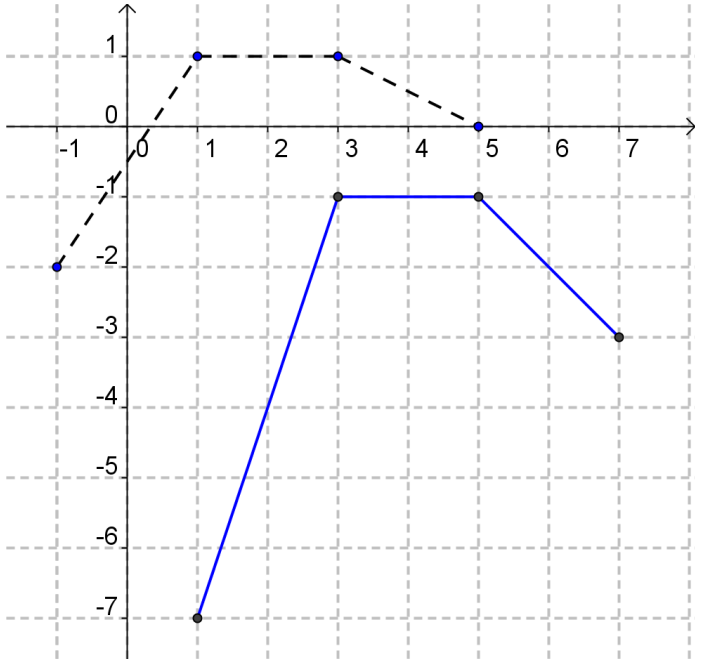


$y=\frac{2}{x+3}+4$, or $y=2f(x+3)+4$

1. vertical scaling by 2, or vertical stretch by 2
2. shift left by 3
3. shift up by 4

$$(x, y)\rightarrow(x-3,2y+4)$$

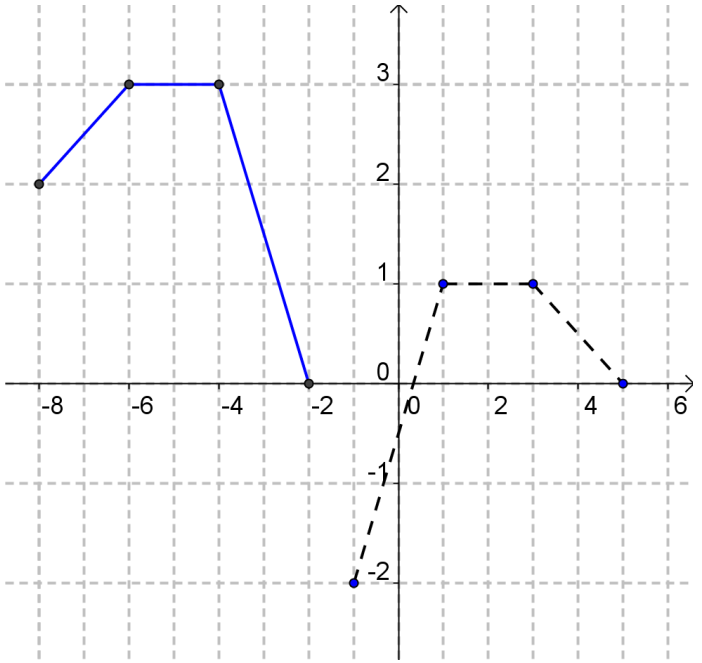
State the transformations and apply them to the provided parent relation (dotted line):



$y=2f(x-2)-3$

1. vertical scaling by 2, or vertical stretch by 2
2. shift right by 2
3. shift down by 3

$(x, y)\rightarrow(x+2, 2y-3)$

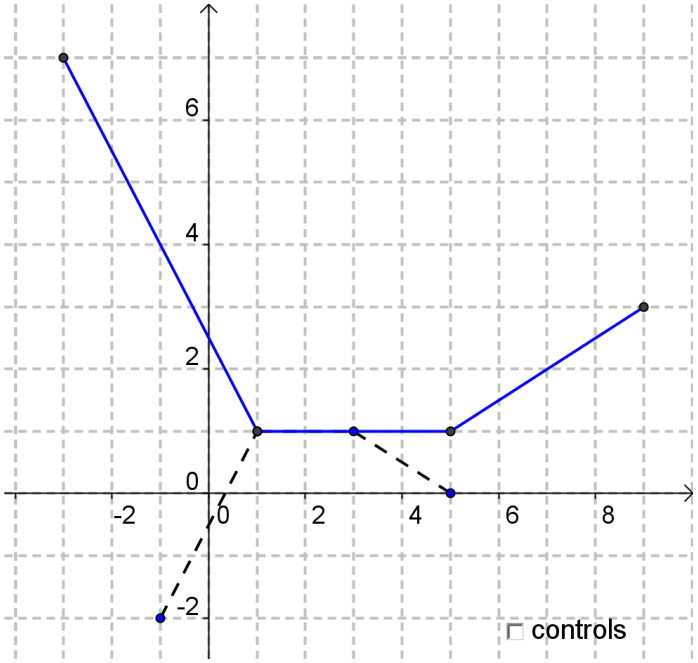


$y=f[-(x+3)]+2$

1. horizontal reflection
2. shift left by 3
3. shift up by 2

$(x, y)\rightarrow(-x-3, y+2)$

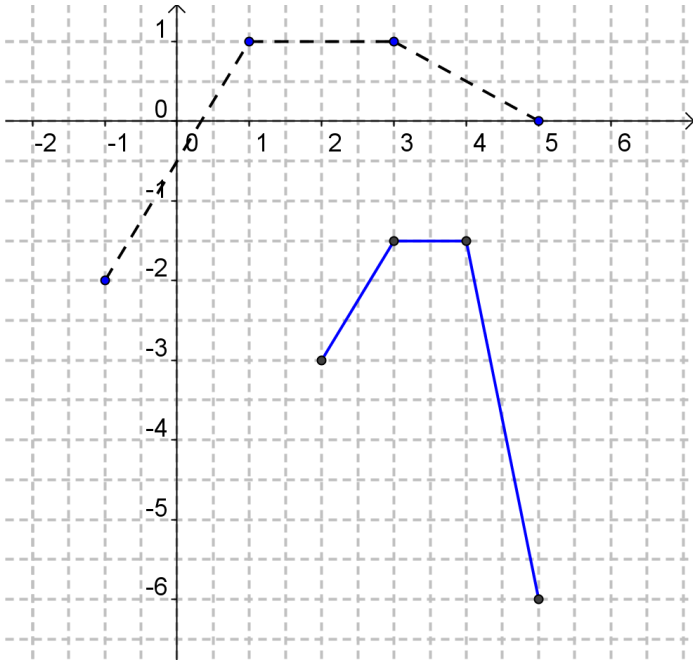
State the transformations and apply them to the provided parent relation (dotted line):



$$y=-2\,f\left[\frac{1}{2}(x+1)\right]+3$$

1. vertical reflection in the x-axis
2. vertical scaling by 2, or vertical stretch by 2
3. horizontal scaling by 2, or horizontal stretch by 2
4. shift left by 1
5. shift up by 3

$$(x\,,\,y)\rightarrow(2\,x-1,-2\,y+3)$$



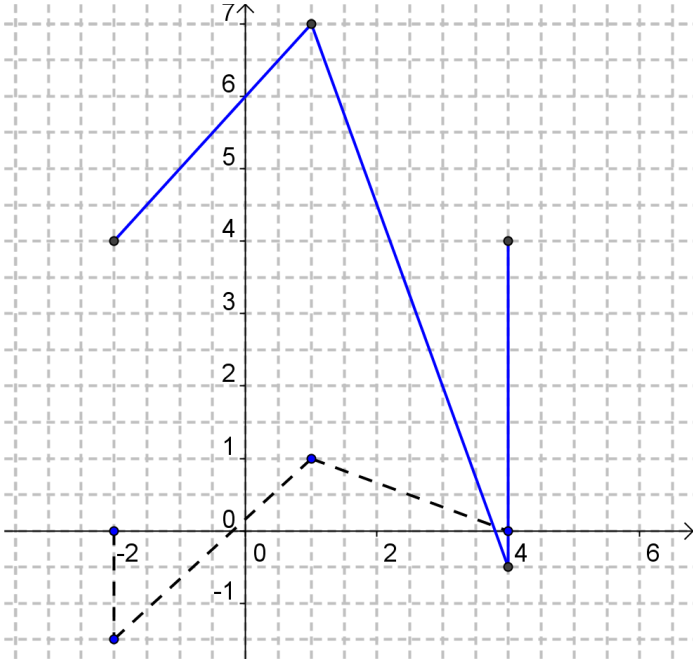
$$y=\frac{3}{2}f\,(-2\,x+9)-3$$

Write in standard form: $y=\frac{3}{2}f\left[-2\left(x-\frac{9}{2}\right)\right]-3$

1. vertical scaling by 1.5, or vertical stretch by 1.5
2. horizontal reflection in the y-axis
3. horizontal scaling by 0.5, or horizontal compression by 2
4. shift right by 4.5
5. shift down by 3

$$(x\,,\,y)\rightarrow(-0.5\,x+4.5,1.5\,y-3)$$

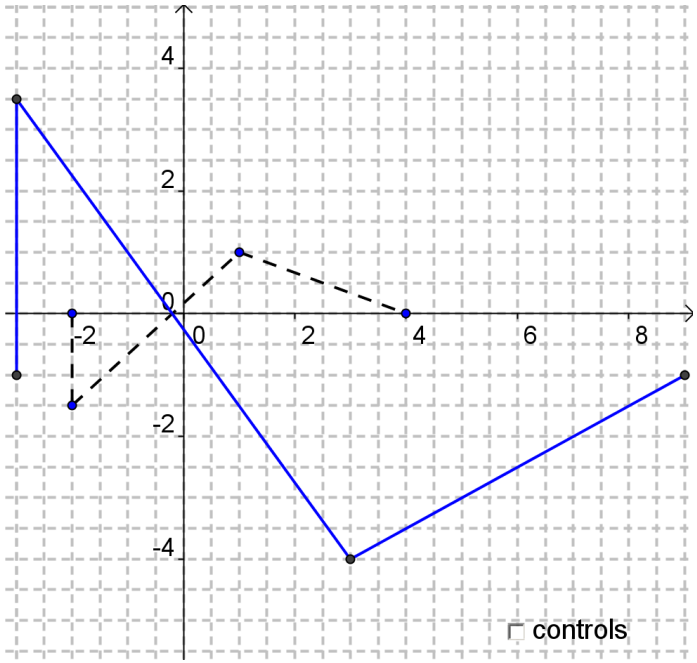
State the transformations and apply them to the provided parent relation (dotted line):



$$y=3f\left[-(x-2)\right]+4$$

1. vertical scaling, or stretch, by a factor of 3
2. horizontal reflection in the y-axis
3. shift right by 2
4. shift up by 4

$$(x,y)\rightarrow(-x+2,3y+4)$$

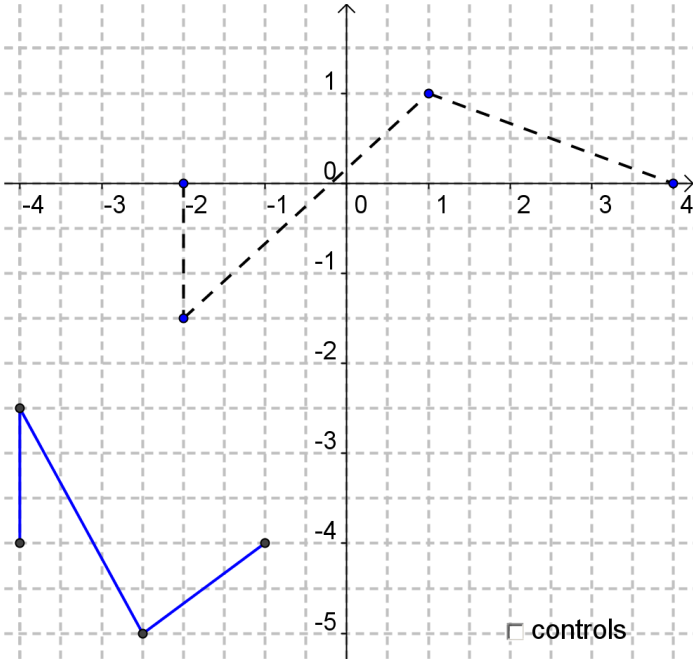


$$y=-3f\left[\frac{1}{2}(x-1)\right]-1$$

1. vertical reflection in the x-axis
2. vertical scaling, or stretch, by 3
3. horizontal scaling, or stretch, by 2
4. shift right by 1
5. shift down by 1

$$(x,y)\rightarrow(2x+1,-3y-1)$$

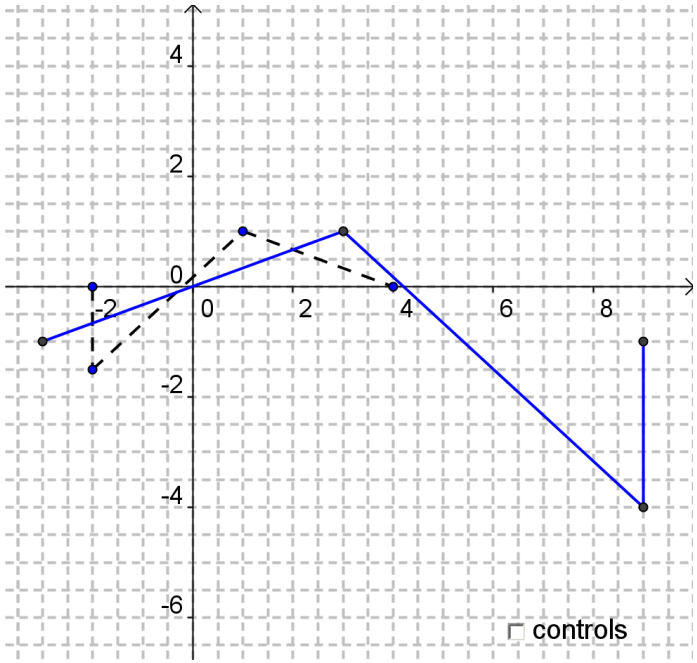
State the transformations and apply them to the provided parent relation (dotted line):



$$y=-f\left[2(x+3)\right]-4$$

1. vertical reflection in the x-axis
2. horizontal scaling by 0.5, or compression by 2
3. shift left by 3
4. shift down by 4

$$(x,y)\rightarrow(0.5x-3,-y-4)$$



$$y=2f\left(-\frac{1}{2}x+\frac{5}{2}\right)-1$$

Write in standard form: $y=2f\left[-\frac{1}{2}(x-5)\right]-1$

1. vertical scaling, or stretch, by 2
2. horizontal reflection in the y-axis
3. horizontal scaling, or stretch, by 2
4. shift right by 5
5. shift down by 1

$$(x,y)\rightarrow(-2x+5,2y-1)$$