Graph transformations - reflections

149a

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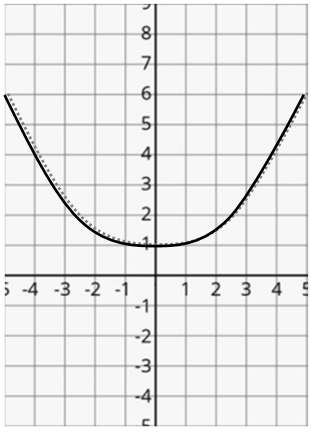
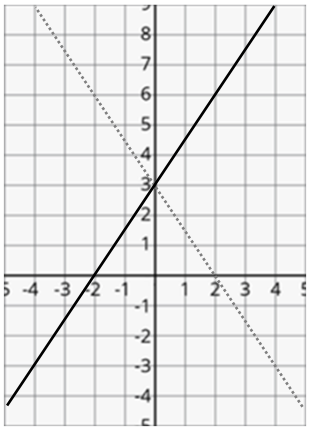
Name:

For each graph f(x) given on the grids, plot the reflected graphs of:

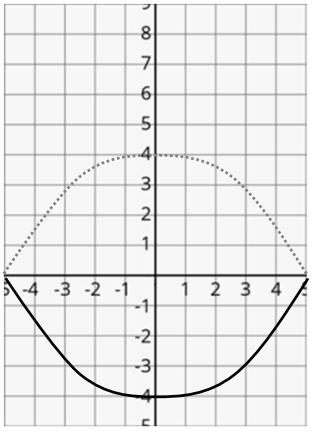
a) f(–x)



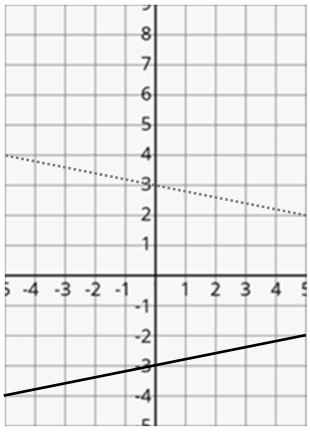
b) f(–x)



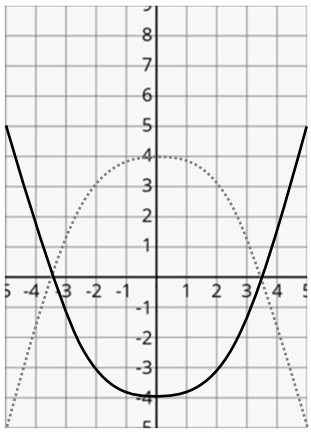
c) – f(x)



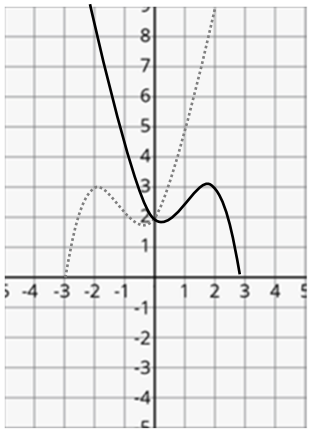
d) – f(x)



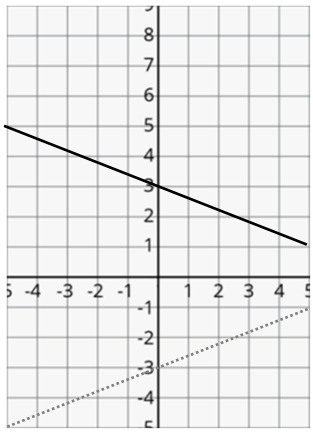
e) – f(x)



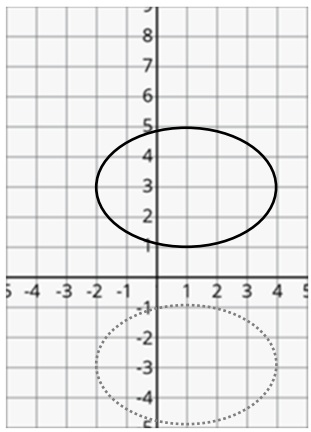
f) f(–x)



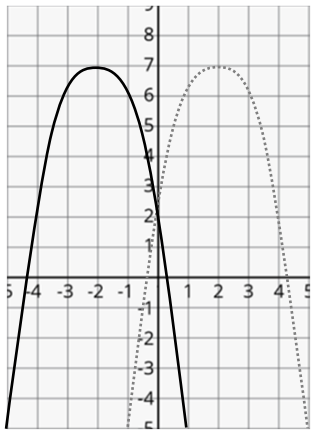
g) – f(x)



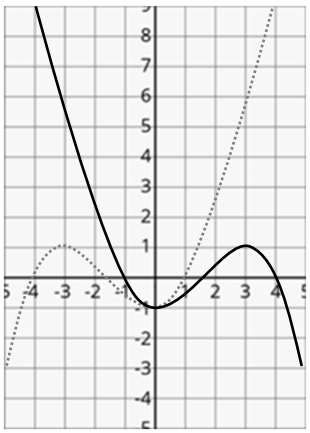
h) – f(x)



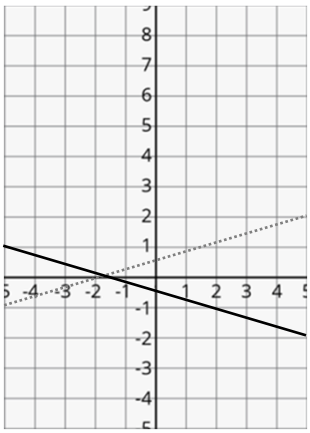
i) f(– x)



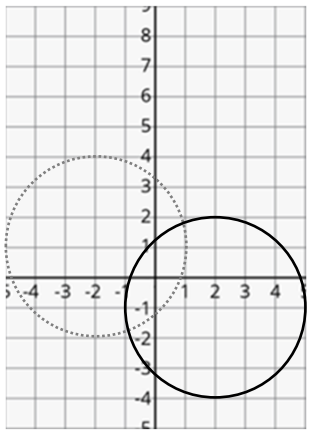
j) f(–x)



k) – f(x)



l) –f(–x)



Describe the transformation that maps the graph $y = x^3 + 4$ to $y = -x^3 - 4$

Reflection in the x-axis

Graph transformations - translations

149b

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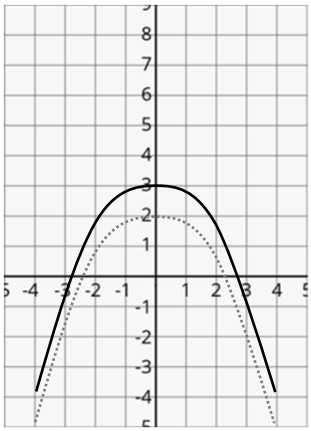
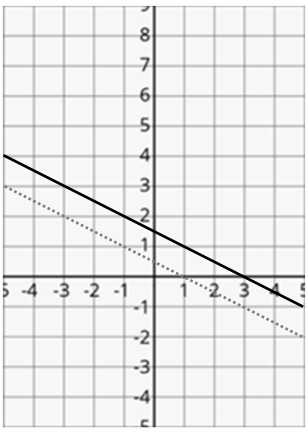
Name:

For each graph f(x) given on the grids, plot the translated graphs of:

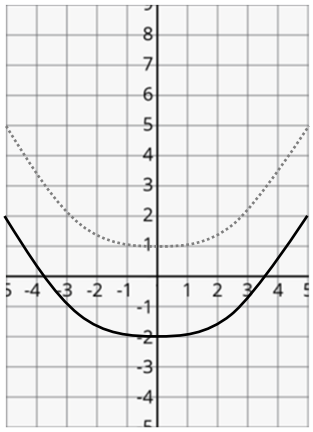
a) f(x) + 1



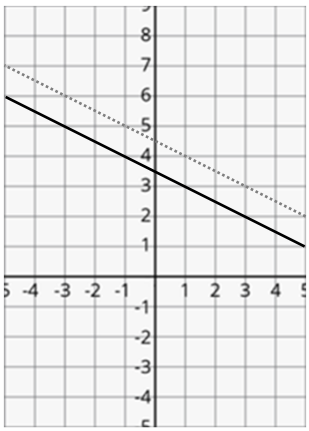
b) f(x – 2)



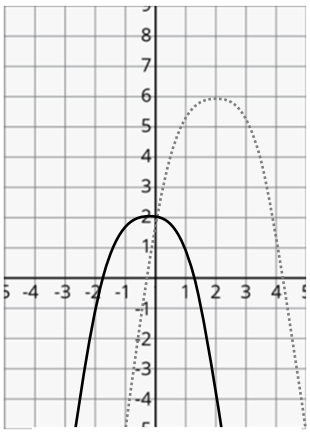
c) f(x) – 3



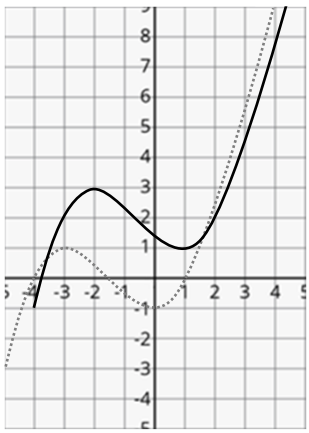
d) f(x + 2)



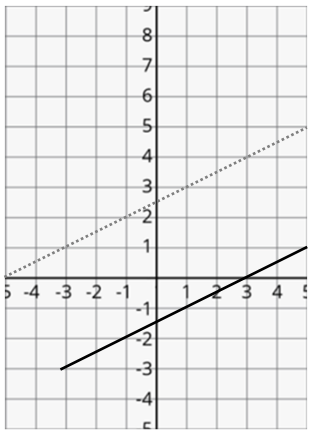
e) f(x + 1) – 4



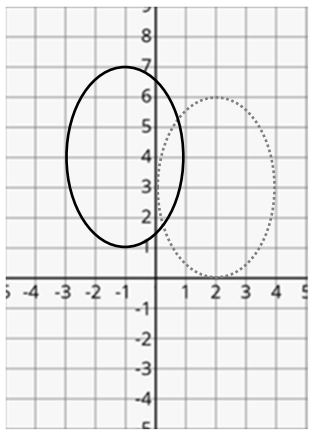
f) f(x – 1) + 2



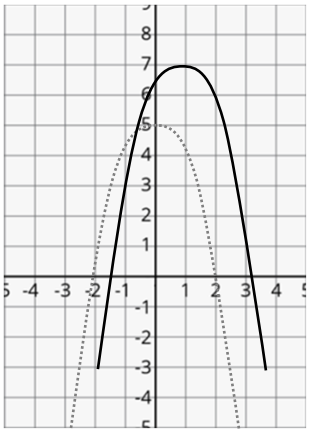
g) f(x – 2) – 3



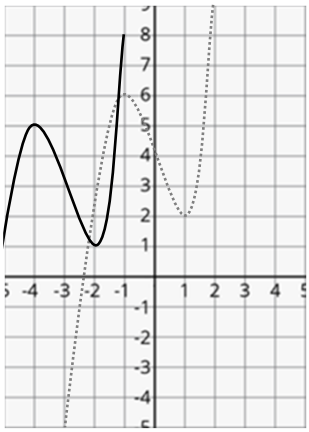
h) f(x + 3) + 1



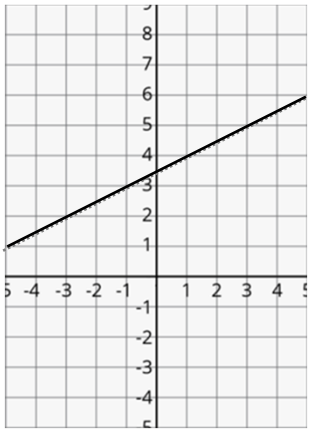
e) f(x – 1) + 2



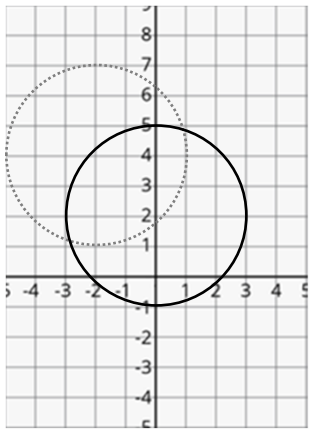
f) f(x – 3) – 1



g) f(x – 2) + 1



h) f(x – 2) – 2



Describe the transformation that maps the graph $y = x^2 + 2$ onto $y = x^2 + 6$

Translation 4 units in the positive y direction

Graph transformations - stretches

149c

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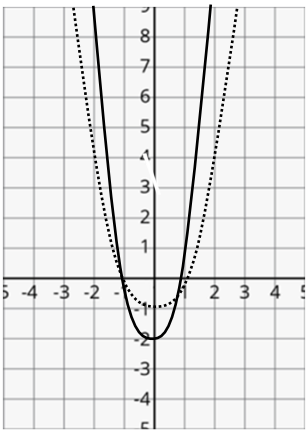
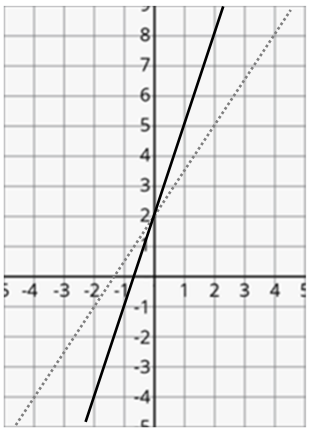
Name:

For each graph f(x) given on the grids, plot the graphs of:

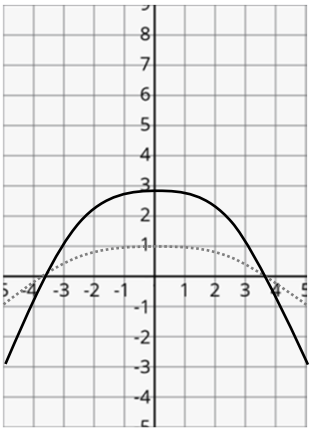
a) 2f(x)



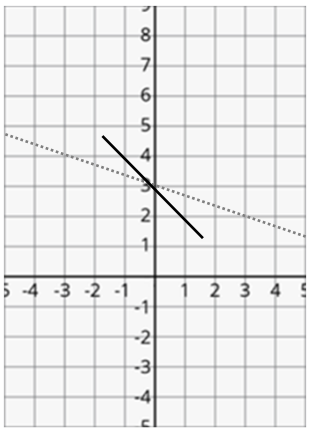
b) f(2x)



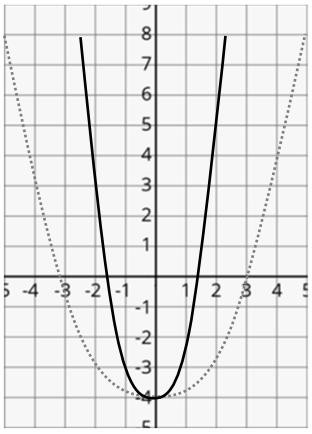
c) 3f(x)



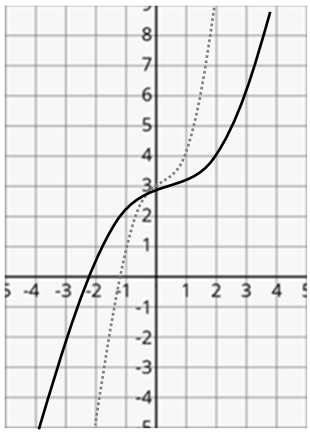
d) f(3x)



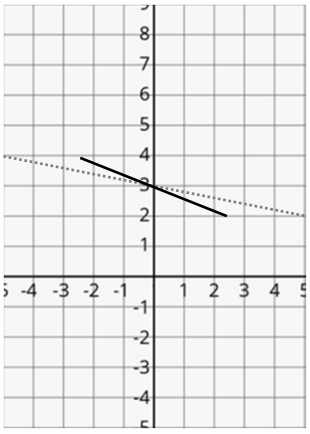
e) ½f(x)



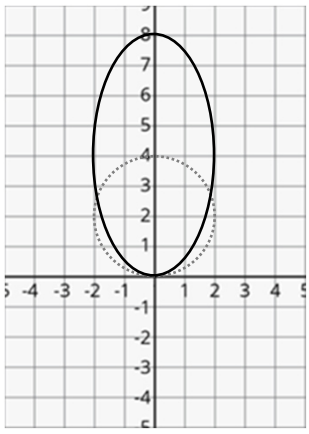
f) f(½x)



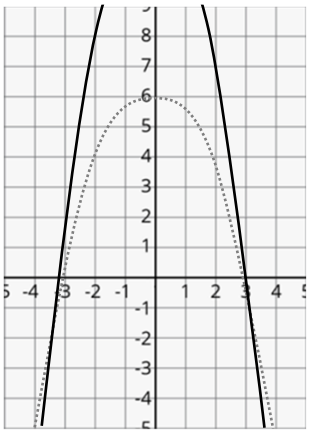
g) f(2x)



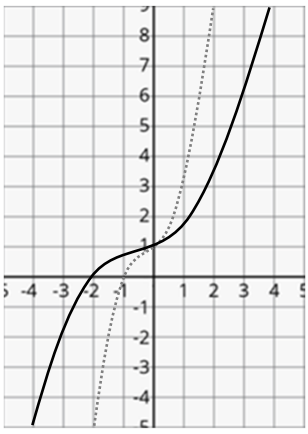
h) 2f(x)



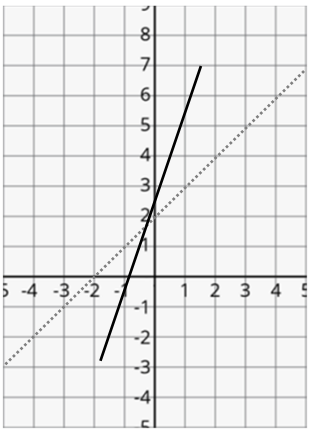
e) 2f(x)



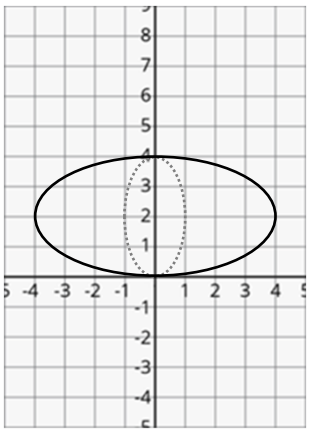
f) f(0.5x)



g) f(3x)



h) f(0.25x)



Describe the transformation that maps the graph $y = x^2$ to $y = \frac{1}{9}x^2$

Stretch S.F 1/9 parallel to the y-axis

(5)