

# PC12 LG 14A (Formative Assessment)

Marking Teacher: \_\_\_\_\_

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

Student #: \_\_\_\_\_

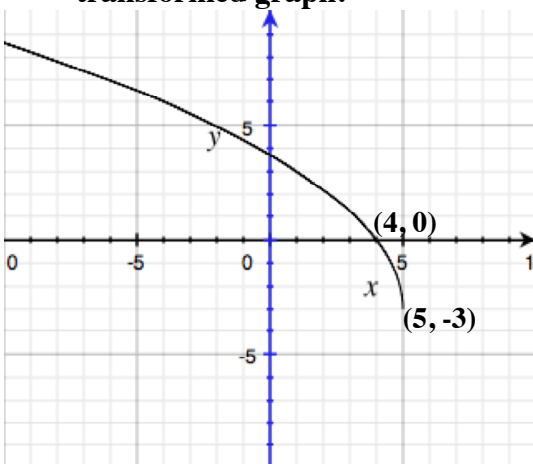
1. What transformations can you apply to  $y = \sqrt{x}$  to obtain the graph of the function  $y = 3\sqrt{2x - 10}$ . What is the domain and range of this transformed function?

2. a) State the domain and range of the function  $f(x) = -2\sqrt{5x - 15} - 4$ .

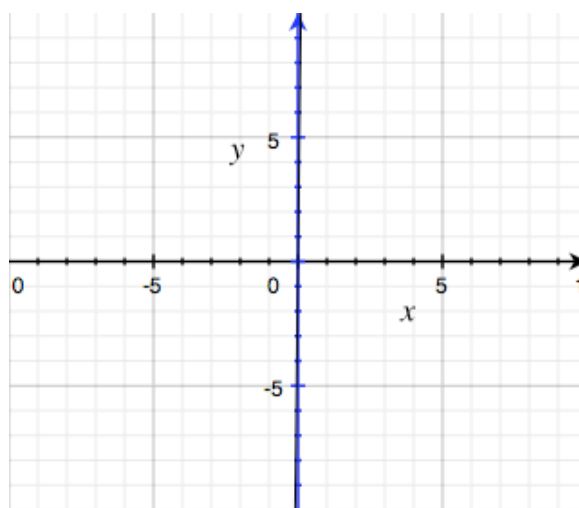
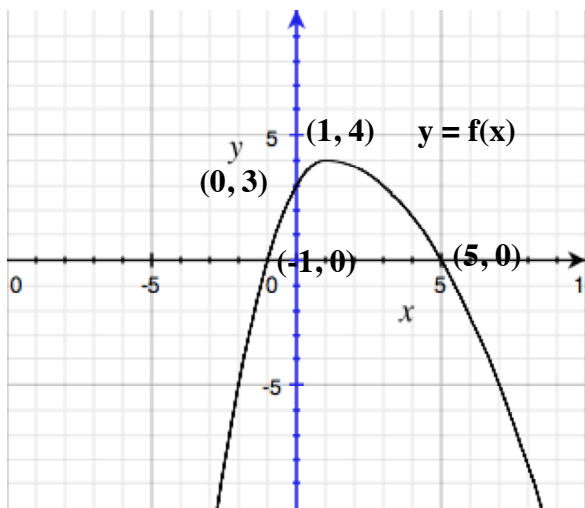
b) Write the equation of a radical function with domain  $x < 4$  and range  $y < 8$ .

3. Write the equation and state the domain & range that results from these set of transformations on  $y = \sqrt{x}$ : a vertical stretch (*EXPANSION*) by a factor of 5, a reflection in the x-axis, a horizontal stretch (*COMPRESSION*) by a factor of  $\frac{1}{2}$  and a horizontal translation right 8.

4. The following graph is formed by transforming the graph  $y = \sqrt{x}$ . Find the equation of this transformed graph.

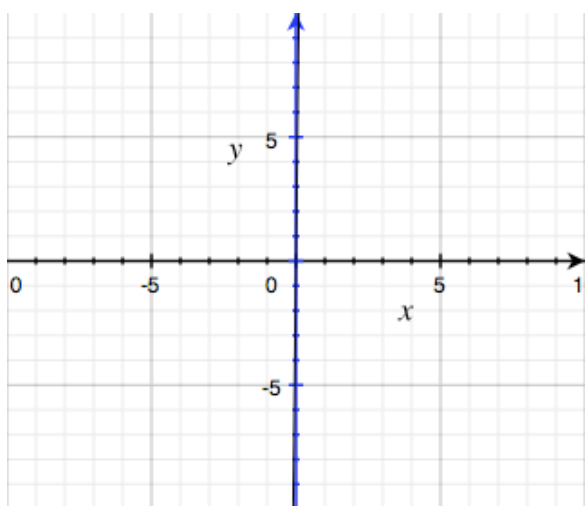


5. Given the graph of  $y = f(x)$  below, sketch the graph of  $y = \sqrt{f(x)}$ .



6. If  $g(x) = 4 - x^2$  find the domain and range of  $g(x)$  and of  $\sqrt{g(x)}$ .

7. Solve the following equation algebraically and by graphing:  $3 + \sqrt{x-1} = x$ .



Directions:  See me about this  Move on to next guide  Review and redo

# PC12 LG 14B (Formative Assessment)

Marking Teacher: \_\_\_\_\_

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

Student #: \_\_\_\_\_

1. What transformations can you apply to  $y = \sqrt{x}$  to obtain the graph of the function  $y = -2\sqrt{3x+12} - 5$ . What is the domain and range of this transformed function?

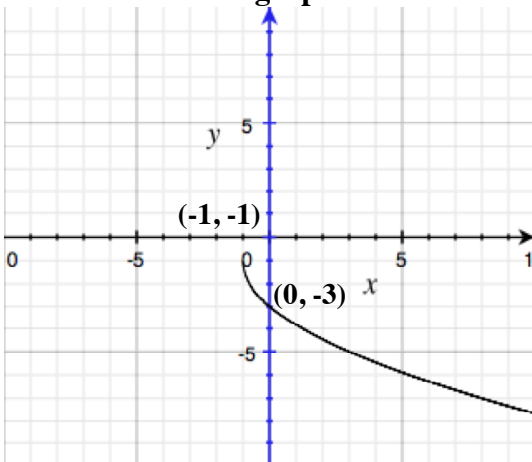
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2. a) State the domain and range of the function  $f(x) = 4\sqrt{2x-12} + 8$ .

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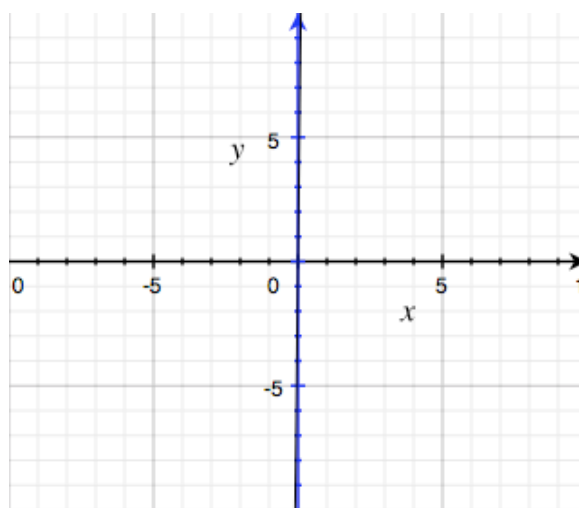
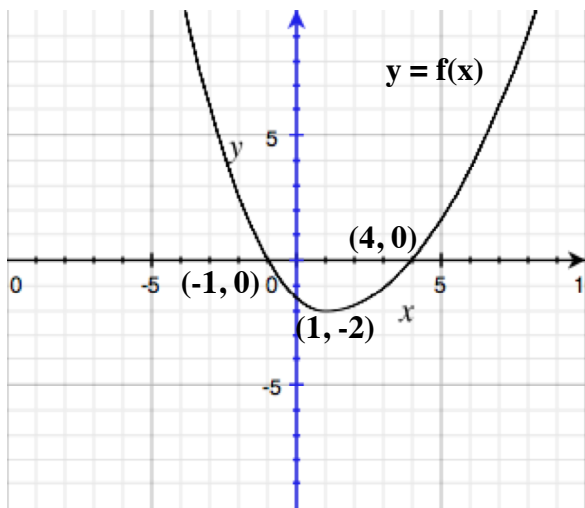
b) Write the equation of a radical function with domain  $x < -2$  and range  $y > 5$ .

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3. Write the equation and state the domain & range that results from these set of transformations on  $y = \sqrt{x}$ : a vertical stretch (*COMPRESSION*) by a factor of  $\frac{1}{3}$ , a reflection in the y-axis, a horizontal stretch (*COMPRESSION*) by a factor of  $\frac{1}{6}$ , a horizontal translation left 2 and a vertical translation down 7.

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4. The following graph is formed by transforming the graph  $y = \sqrt{x}$ . Find the equation of this transformed graph.

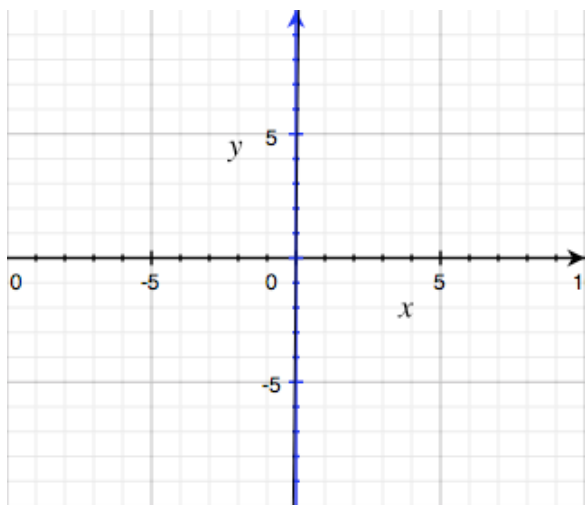


5. Given the graph of  $y = f(x)$  below, sketch the graph of  $y = \sqrt{f(x)}$ .



6. If  $g(x) = x^2 - 16$  find the domain and range of  $g(x)$  and of  $\sqrt{g(x)}$ .

7. Solve the following equation algebraically and by graphing:  $\sqrt{x+17} + 3 = x$ .



Directions:  See me about this  Move on to next guide  Review and redo