

Ready, Set, Go!

Ready

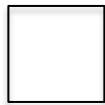
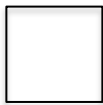
Topic: Square roots

The area of a square is given. Find the length of the side.



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1. 16 in^2 2. $(x - 11)^2 \text{ ft}^2$ 3. $(25a^2 + 60a + 36) \text{ cm}^2$



4. If the length of the side of a square is $(x - 24) \text{ cm}$, what do we know about the value of x ?

Complete the table of values for $f(x) = \sqrt{x}$. Write answers in simplest radical form.

5.		6.		7.	
x	$f(x)$	x	$f(x)$	x	$f(x)$
1		25		$x^2 - 2x + 1$	
4		50		$x^2 - 4x + 4$	
9		75		$x^2 - 6x + 9$	
16		100		$x^2 - 8x + 16$	
25		125		$x^2 - 10x + 25$	
36		150		$x^2 - 12x + 36$	
49		175		$x^2 - 14x + 49$	
64		200		$x^2 - 16x + 64$	
81		225		$x^2 - 18x + 81$	
100		250		$x^2 - 20x + 100$	

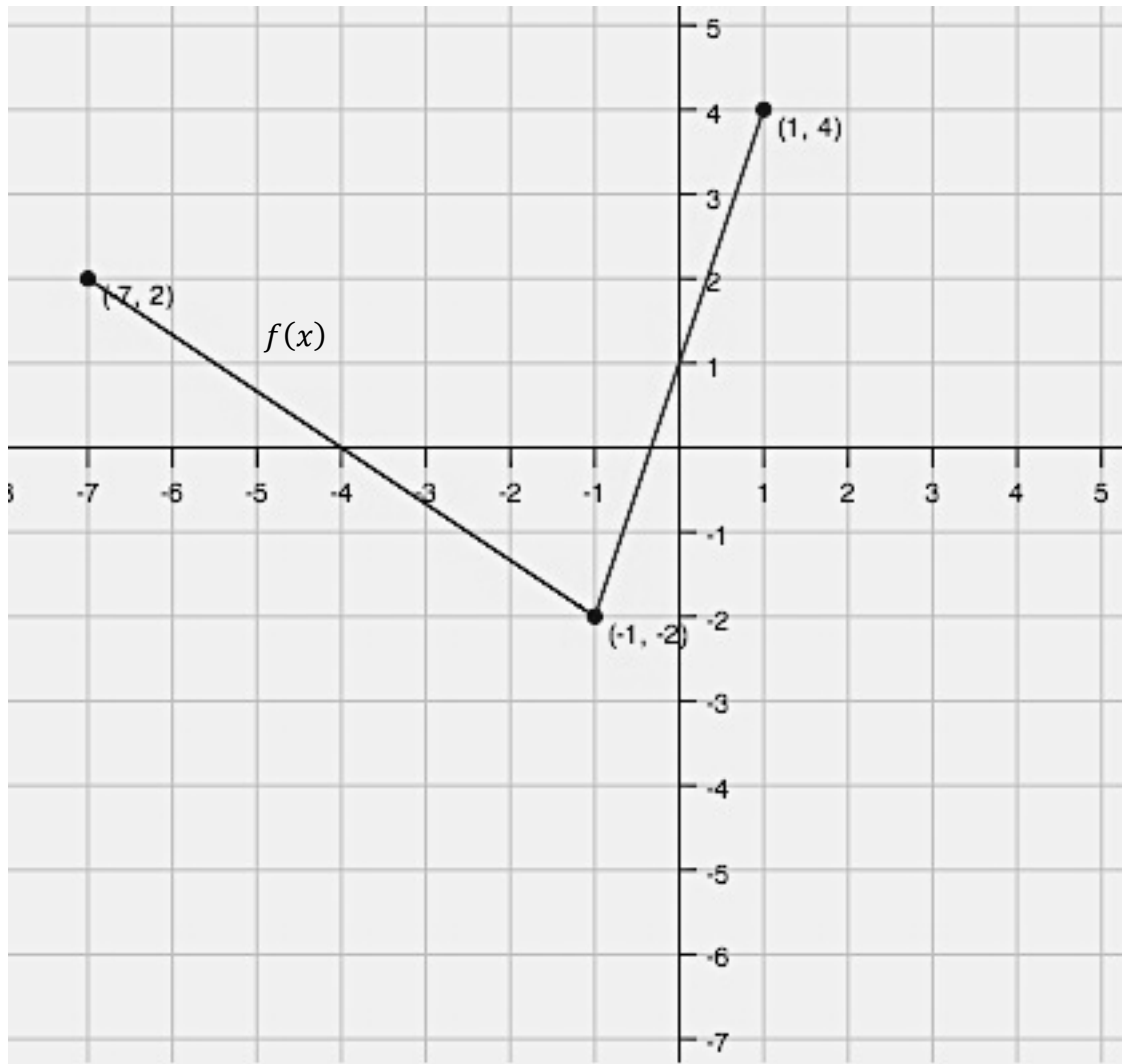
Set Topic: Inverse functions

8. Given: $f(x) = \{(-13, 5)(-9, -9)(-5, -2)(-1, -5)(0, -4)(4, 6)(9, 10)(14, 32)\}$

Find $f^{-1}(x) = \{(,)(,)(,)(,)(,)(,)(,)(,)\}$



9. The function $f(x)$ is shown on the graph. Graph $f^{-1}(x)$ on the same set of axes.



10. Is the graph of $f^{-1}(x)$ also a function? Justify your answer.

11. I am going on a long trip to Barcelona, Spain. I am only taking one suitcase and it is packed very full. I plan to arrive completely exhausted at my hotel in the middle of the night. The only thing I will want to take out of my suitcase is a pair of pajamas. So when I packed my suitcase at home, did I want to put my pajamas in first, somewhere in the middle, or last? Explain.



12. Write the inverse function for the table of values.

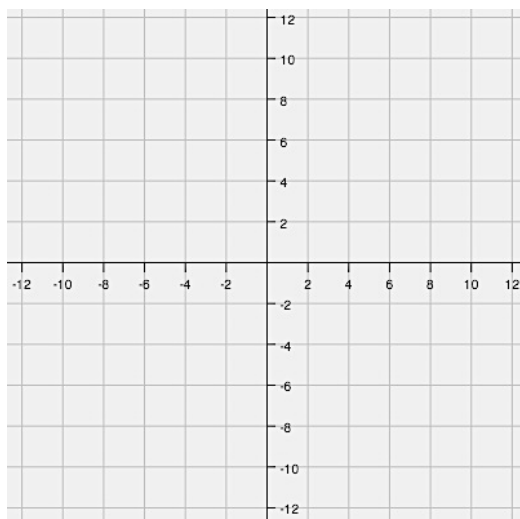
Input x	-10	-6	-2	2	6
Output $g(x)$	-2	-1	0	1	2

Input x					
Output $g^{-1}(x)$					

13. Use the points in problem 12. Graph $g(x)$ in black and $g^{-1}(x)$ in a different color on the coordinate grid at the right.

Graph the line of reflection for the corresponding points.

14. Is $g^{-1}(x)$ also a function? Justify your answer.



Go

Topic: Multiplying square roots

Multiply. Write your answers in simplest radical form.

15. $\sqrt{3}(4 + 5\sqrt{3})$

16. $6\sqrt{11}(2 - \sqrt{11})$

17. $(1 - 7\sqrt{2})(1 - \sqrt{2})$

18. $(3 + 2\sqrt{13})(3 - 2\sqrt{13})$

19. $(4 + 3\sqrt{5})(4 - 3\sqrt{5})$

20. $(1 - 3\sqrt{6})(5 - 2\sqrt{6})$

