

Alg 2 Review-Topic 2 Fall 2019

Use this review, go over your notes, and look over your homework to prepare for the test over Topic 2. This test will have some questions from the Agilemind website and some written questions to answer.

1. Write the equation of the inverse relation for each function and find each value.

a) $f(x) = \frac{4x^2 - 1}{5}$ Find $f^{-1}(7)$ b) $y = -3x + 1$ Find $f^{-1}(13)$

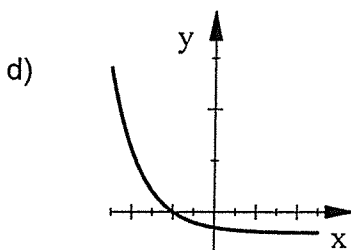
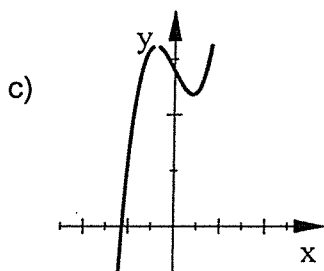
c) $y = -7 \cdot \sqrt[3]{x-4} + 6$ Find $f^{-1}(-8)$ d) $y = 9\left(\frac{5x-1}{2}\right)^3$ Find $f^{-1}(72)$

2. Tell if the inverse relation of each is a function or not.

For a and b use the given equations.

a) $y = -\frac{2}{3}x + 7$ b) $y = \frac{x-3}{x^2 - 4x - 12}$

For c and d use the given graphs.



3. State the restrictions on each such that the inverse IS a function.

a) $f(x) = -3x^2 + 1$ b) $f(x) = 2(x+1)^2 - 8$

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ANSWERS

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1. a) $f^{-1}(x) = \sqrt{\frac{5x+1}{4}} = \frac{\sqrt{5x+1}}{2}$ $f^{-1}(7) = 3$ b) $f^{-1}(x) = \frac{x-1}{-3}$ $f^{-1}(13) = -4$

c) $f^{-1}(x) = \left(\frac{x-6}{-7}\right)^5 + 4$ $f^{-1}(-8) = 36$ d) $f^{-1}(x) = \frac{2 \cdot \sqrt[3]{\frac{x}{9}} + 1}{5}$ $f^{-1}(72) = 1$

2. a) Yes b) No c) No d) Yes

3. a) $D : x \geq 0$ 4. $D : x \geq -1$