Bellwork Alg 2B Friday, October 6, 2017

Solve each equation for B

1. $B = K(B - M) + D$

2. $R = \frac{B + X}{E - B} - R$

Is the inverse of each relation a function?

3. $y = x^6 - 2x^5 - 11x^4 + 12x^3 + 36x^2$

4. $y = \frac{x - 3}{x + 1}$

5. $y = -x^3 + 9x^2 - 27x + 27$

6. $y = 2^x - 3$

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Answers

Solve each equation for B

1. $B = K(B - M) + D$

$B = KB - KM + D$

$-KB \quad -KB$

$B - KB = -KM + D$

$B(1 - K) = -KM + D$

$$B = \frac{-KM + D}{1 - K}$$

2. $\frac{R}{+R} = \frac{B + X}{E - B} - \frac{R}{+R}$

$(E - B)2R = \frac{B + X}{E - B}(E - B)$

$2ER - 2RB = B + X$ $+2RB$ $+2RB$

$2ER = B + X + 2RB$

$-X \quad -X$

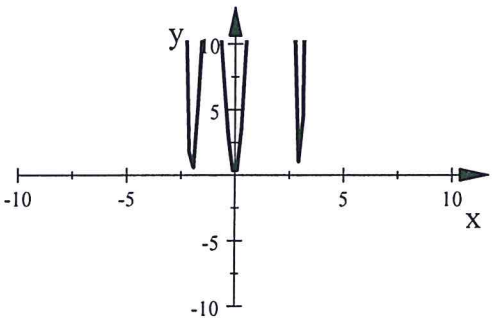
$2ER - X = B + 2RB$

$2ER - X = B(1 + 2R)$

$$\frac{2ER - X}{1 + 2R} = B$$

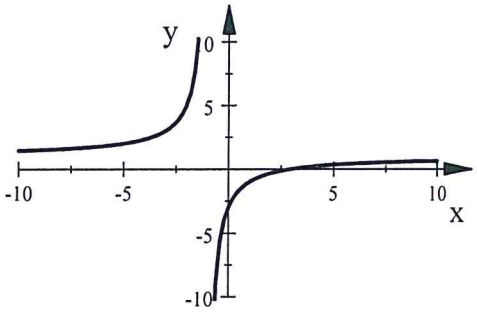
Is the inverse of each relation a function?

3. $y = x^6 - 2x^5 - 11x^4 + 12x^3 + 36x^2$



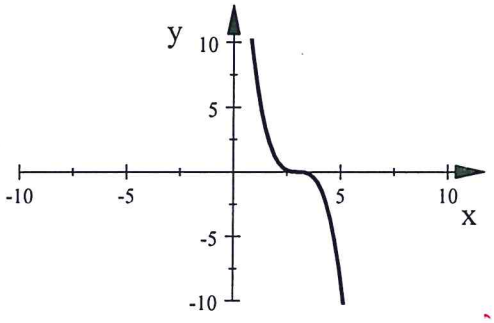
INVERSE IS NOT A FUNCTION.
ORIGINAL FUNCTION FAILS HORIZONTAL LINE TEST.

4. $y = \frac{x - 3}{x + 1}$



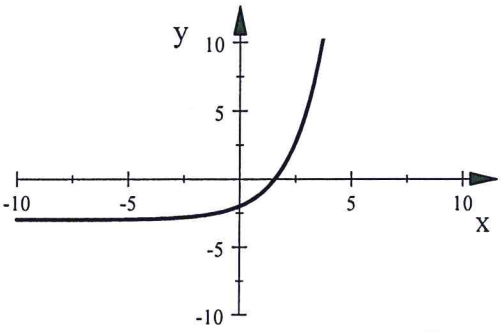
INVERSE IS A FUNCTION.
ORIGINAL PASSES HORIZONTAL LINE TEST.

5. $y = -x^3 + 9x^2 - 27x + 27$



INVERSE IS A FUNCTION.
ORIGINAL PASSES HORIZONTAL LINE TEST.

6. $y = 2^x - 3$



INVERSE IS A FUNCTION
ORIGINAL PASSES HORIZONTAL LINE TEST.