

Math C

13.2 Inverses part 2 - KEY

1. $f^{-1}(x) = \frac{x+1}{5} = \frac{x}{5} + \frac{1}{5} = \frac{1}{5}x + \frac{1}{5}$; YES

2. $f^{-1}(x) = 7 - 3x$; YES

3. $f^{-1}(x) = \pm\sqrt{-x}$; NO

4. $f^{-1}(x) = \pm\sqrt{\frac{x-10}{3}} = \pm\sqrt{\frac{x}{3} - \frac{10}{3}} = \pm\sqrt{\frac{1}{3}x - \frac{10}{3}}$; NO

5. $f^{-1}(x) = x^2 + 9, x \geq 0$; YES

6. $f^{-1}(x) = \frac{x^2-6}{5} = \frac{x^2}{5} - \frac{6}{5} = \frac{1}{5}x^2 - \frac{6}{5}, x \geq 0$; YES

7. $f^{-1}(x) = \frac{1}{4x} - 2 = \frac{1}{4x} - \frac{8x}{4x} = \frac{1-8x}{4x}, x \neq 0$; YES

8. $f^{-1}(x) = 4 - \frac{6}{5-x} = \frac{4(5-x)}{5-x} - \frac{6}{5-x} = \frac{14-4x}{5-x}, x \neq 5$; YES