

# Answer Key

## Lesson 6.4

### Practice Level C

1-6. Show that  $f(g(x)) = x$  and  $g(f(x)) = x$ .

7.  $f^{-1}(x) = \frac{3}{2} - \frac{1}{2}x$     8.  $f^{-1}(x) = 5x - 15$

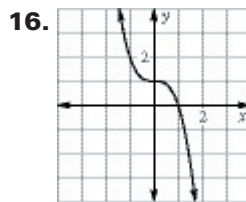
9.  $f^{-1}(x) = x^2 + 3, x \geq 0$

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

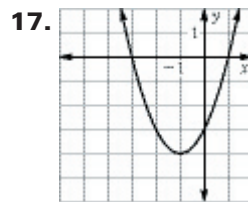
11.  $f^{-1}(x) = \sqrt[7]{\frac{x}{4}}$     12.  $f^{-1}(x) = \sqrt{\frac{x-1}{4}}, x \geq 1$

13.  $f^{-1}(x) = \frac{4}{3x+1}$     14.  $f^{-1}(x) = \frac{1}{5}x^5 - \frac{4}{5}$

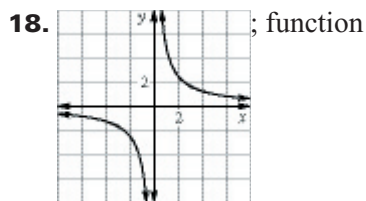
15.  $f^{-1}(x) = x - 1, x \geq 1$



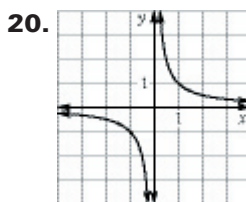
function



not a function



19. 548.64 U.S. dollars



21.  $f(f(x)) = f\left(\frac{1}{x}\right) = \frac{1}{\left(\frac{1}{x}\right)} = x$     22. yes