

(4.) cont

$$y = \frac{\cancel{4+7x} + 4}{\cancel{4+7x} - 7} \cdot \frac{x-1}{x-1}$$

$$y = \frac{4+7x+4(x-1)}{4+7x-7(x-1)}$$

$$y = 4+7x+4\cancel{(x-1)}$$

$$y = \frac{4x+7x+4x-4}{4+7x-7x+7}$$

$$y = \frac{7x+4x}{4+7-7} \quad y = \frac{7x+4x}{-3}$$

ANSWER

$$\textcircled{1} \quad xy = \frac{y+4}{x-7} \cdot y-7 \quad \left| \begin{array}{l} \cancel{y \neq -4, 7} \\ df = (-\infty, 7) \cup (7, \infty) \end{array} \right.$$

$$\begin{aligned} & y \\ & \cancel{y} \cancel{y} \cancel{x} \cancel{y} \cancel{y+4} \\ & 4+y-7x = y \end{aligned}$$

$$xy - 7x = y + 4$$

$$x(y-7) = y + 4$$

$$xy - 7x = y + 4$$

-4

$$\begin{aligned} & xy - 7x - y = 4 \\ & \quad + 7x \end{aligned}$$

$$\cancel{xy - 7x - y = 4}$$

$$xy - y = 4 + 7x$$

$$\frac{y(x-1)}{x-1}$$

$$f^{-1}(x) = \frac{4+7x}{x-1}$$

$$\textcircled{3} \quad f(x) = \frac{1}{2}x^2$$

$$f^{-1}(x) = \sqrt[3]{12+2x}$$

$$f^{-1}$$

$$f(x) = \frac{1}{2}x^3 - 6$$

+6

$$6+x = \frac{1}{2}y^3$$

$$2(6+x) = 12y^3$$

$$\sqrt[3]{12+2x} = \sqrt[3]{y^3}$$

$$f^{-1}(x) = \sqrt[3]{12+2x}$$

(3.) cohw

$$f \circ f^{-1} \quad \frac{1}{2} \sqrt[3]{12+2x}^3 - 6$$

$$\frac{1}{2} (12+2x) - 6$$

0

$$6000 \left(1 + \frac{0.06}{2}\right)^{2 \cdot 9} \approx 4214.59$$