Name: **Class/Set:**

Functions - Inverse Functions

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1: Work out the following:

a) If $h(x) = x - 9$, find $h^{-1}(4)$

b) If $g(x) = \frac{-x}{3}$, find $g^{-1}(10)$

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2: Work out the following:

a) If $f(x) = \frac{-x - 8}{8}$, find $f^{-1}(8)$

b) If $h(x) = \sqrt{\left(\frac{-x}{7}\right)} + 3$, find $h^{-1}(10)$

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3: Work out the following:

a) If $f(x) = \frac{5}{x - 8}$, find $f^{-1}(-1\frac{2}{3})$

b) If $g(x) = \frac{5x + 10}{6x + 3}$, find $g^{-1}(1\frac{1}{39})$

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4: Work out the following:

a) If $h(x) = \frac{-2x + 9}{x - 1}$, find $h^{-1}(3)$

b) If $g(x) = \frac{4}{x} + 3$, find $g^{-1}(1)$

5: Find the inverse of each function:

a) If $f(x) = x^2$, find $f^{-1}(x)$

b) If $h(x) = \sqrt{x}$, find $h^{-1}(x)$

6: Find the inverse of each function:

a) If $f(x) = \sqrt{\left(\frac{-x - 10}{10}\right)}$, find $f^{-1}(x)$

b) If $g(x) = -8(x - 10)^2$, find $g^{-1}(x)$

7: Find the inverse of each function:

a) If $g(x) = \frac{9}{x + 4}$, find $g^{-1}(x)$

b) If $f(x) = \frac{-6x + 7}{5x - 4}$, find $f^{-1}(x)$

Answers: Functions - Inverse Functions

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1:	a) 13	b) −30
2:	a) −72	b) −343
3:	a) 5	b) 6
4:	a) $2\frac{2}{5}$	b) −2
5:	a) $\sqrt{x}$	b) x^2
6:	a) $-10x^2 - 10$	b) $\sqrt{\left(\frac{-x}{8}\right)} + 10$
7:	a) $\frac{9}{x} - 4$	b) $\frac{4x + 7}{5x + 6}$