AUC PreCalculus

Assignment 46.

The deadline for all homework assignments is the one specified in Archie before 11:59 pm. As discussed in class, It must be correctly uploaded in order to be graded. Show all your work and justifications.

For Exercises 47–58, a one-to-one function is given.

Write an equation for the inverse function.

47. $f(x) = \dfrac{4 - x}{9}$

$f^{-1}(x) = 4 - 9x$

48. $g(x) = \dfrac{8 - x}{3}$

$g^{-1}(x) = 8 - 3x$

51. $m(x) = 4x^3 + 2$

$m^{-1}(x) = \sqrt[3]{\dfrac{x - 2}{4}}$

52. $n(x) = 2x^3 - 5$

$n^{-1}(x) = \sqrt[3]{\dfrac{x + 5}{2}}$

55. $t(x) = \dfrac{x - 4}{x + 2}$

$t^{-1}(x) = -\dfrac{2x + 4}{x - 1}$

56. $v(x) = \dfrac{x - 5}{x + 1}$

$v^{-1}(x) = -\dfrac{x + 5}{x - 1}$

49. $h(x) = \sqrt[3]{x - 5}$

$h^{-1}(x) = x^3 + 5$

50. $k(x) = \sqrt[3]{x + 8}$

$k^{-1}(x) = x^3 - 8$

53. $c(x) = \dfrac{5}{x + 2}$

$c^{-1}(x) = \dfrac{5 - 2x}{x}$

54. $s(x) = \dfrac{2}{x - 3}$

$s^{-1}(x) = \dfrac{3x + 2}{x}$

57. $f(x) = \dfrac{(x - a)^3}{b} - c$

$f^{-1}(x) = \sqrt[3]{b(x + c)} + a$

58. $g(x) = b(x + a)^3 + c$

$g^{-1}(x) = \sqrt[3]{\dfrac{x - c}{b}} - a$