Extra Problems Sheet – Brief Calculus 4.2 Name: _____

Find the derivative:

23. $h(t) = \sqrt{3}t^3 + \dfrac{t^2}{\sqrt{2}}$

27. $y = \frac{2}{3}x^{1/2}$

37. $f(x) = 4\sqrt{x^3}$

41. $y = x^{-3} + x^{-2} + 2x^2$

45. $f(x) = \dfrac{3}{x^3}$

51. $f(x) = \dfrac{x-1}{2x}$

57. $f(t) = \dfrac{1}{t} - \dfrac{1}{t^2} + \dfrac{1}{t^3}$

63. $f(x) = \dfrac{1}{\sqrt[4]{x^3}}$

find the value of the derivative at the indicated point.

77. $y = 1/\sqrt[3]{x}$, at $(-8, -\frac{1}{2})$