Homework HW0

1.
Chapter 1 Ex. 1

1. Calculate:

a) $\dfrac{35.7 \cdot 64 - 7^3}{45 + 5^2}$

b) $\dfrac{5}{4} \cdot 7 \cdot 6^2 + \dfrac{3^7}{(9^3 - 652)}$

2.
Chapter 1 Ex. 2

2. Calculate:

a) $(2+7)^3 + \dfrac{273^{2/3}}{2} + \dfrac{55^2}{3}$

b) $2^3 + 7^3 + \dfrac{273^3}{2} + 55^{3/2}$

3.
Chapter 1 Ex. 3

3. Calculate:

a) $\dfrac{3^7 \log(76)}{7^3 + 546} + \sqrt[3]{910}$

b) $43 \cdot \dfrac{(\sqrt[4]{250} + 23)^2}{e^{(45 - 3^3)}}$

4.
Chapter 1 Ex. 4

4. Calculate:

a) $\cos^2\left(\dfrac{5\pi}{6}\right) \sin\left(\dfrac{7\pi}{8}\right)^2 + \dfrac{\tan\left(\dfrac{\pi}{6} \ln 8\right)}{\sqrt{7}}$

b) $\cos\left(\dfrac{5\pi}{6}\right)^2 \sin^2\left(\dfrac{7\pi}{8}\right) + \dfrac{\tan\left(\dfrac{\pi \ln 8}{6}\right)}{7 \cdot \dfrac{5}{2}}$

5.
Chapter 1 Ex. 5

5. Define the variable x as $x = 13.5$, then evaluate:

a) $x^3 + 5x^2 - 26.7x - 52$

b) $\dfrac{\sqrt{14x^3}}{e^{3x}}$

c) $\log|x^2 - x^3|$

6.
Chapter 1 Ex. 7

7. Define the variables a, b, c, and d as:
$a = 15.62$, $b = -7.08$, $c = 62.5$ and $d = 0.5(ab - c)$.
Evaluate:

a) $a + \dfrac{ab}{c}\dfrac{(a+d)^2}{\sqrt{|ab|}}$

b) $de^{\left(\frac{d}{2}\right)} + \dfrac{\dfrac{ad+cd}{\dfrac{20}{a}+\dfrac{30}{b}}}{(a+b+c+d)}$