

Math 1271 Quiz 0

September 8, 2020

Work on these problems without using any type of calculator. You should need approximately 15 minutes.

1. Functions and Polynomials. Let $f(x) = x(x + 1)$ and $h \neq 0$, expand the following expression

(1)
$$\frac{f(x + h) - f(x)}{h}$$

in terms of x and h . Simplify as much as possible.

2. Trigonometry. Solve the equation

(2)
$$\sin(2x) = \frac{\sqrt{3}}{2}$$

where $0 \leq x \leq 2\pi$ and is given in radians.

3. Logarithms. Solve $1 - e^{x^2-4} = 0$ for x .

3* Logarithms. Is this correct? Explain.

(3)
$$\log(1 + 2 + 3) = \log(1) + \log(2) + \log(3)$$