The function $f(x) = (x-3)^2 + \frac{1}{2}$ has domain $\mathrm{D}_f : (-\infty, \infty)$ and range $\mathrm{R}_f : \left[\frac{1}{2}, \infty\right)$

limits:

$\lim_{x \to a}$

$\lim\limits_{x \to a^+} f(x)$

$\lim\limits_{x \to a} \frac{f(x)-f(a)}{x-1} = f'(a)$

$\lim\limits_{x \to a} \dfrac{f(x)-f(a)}{x-1} = f'(a)$

$\int \sin x dx$

$\int \sin x \, dx = -\cos x + c$

$\displaystyle\int \sin x \, dx = -\cos x + c$

one way: $\int_a^b$

another way: $\int\limits_a^b$

$$\int_a^b$$

$$\int\limits_a^b$$

$$\int\limits_{2a}^{3b} x^2 \, dx = \left[\frac{x^3}{3}\right]_{2a}^{3b}$$

Summation notation

$\sum\limits_{\infty}$

$$\sum_{n=1}^{\infty} ar^n = a + ar + \cdots + ar^n \quad \int_a^b f(x)\,dx = \lim_{x \to \infty} \sum_{k=1}^{n} f(x,k) \cdot \Delta x$$

vector notation

$\vec{v} = v_1\vec{i} + v_2\vec{i} = \langle v_1, v_2 \rangle$

creating a math paper

It should include:

- title page
- table of contents
- section and subsections
- footnotes
- citations
- biblography

Latex practice

Just and exercise

Use of vfil is important

This is sampel sub title

By Shashank

Candidate

July 30, 2020

Contents

1 Introduction

2 Scoring Criteria

2.1 Communication

2.2 Mathematical Presentation

2.3 Personal Engagement

2.4 Reflection

2.5 Use of Mathematics

3 Conclusion

4 LaTeX

x	1
2	3

Table 1: Caption goes here

Figure 1: Caption goes here

I'll be adding a footnote here. [1]

I'll abe adding a reference here. See table 4

I'll abe adding a reference here. See figure 4

[1] An exmaple footnote

I'll abe adding a citation here [**?**].

Now we'll work on bibliography

References

first Shashank, singh "high school." *practice* web 27 2015