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1
2 <h1 style="text-align: center;"> Latex Examples </h1>
3 <div style="text-align: center;">
4 <table style="margin-left: auto; margin-right: auto;
  text-align:center;">
5 <tr><th>Descrtiption</th> <th>Input Code</th><th>
  Output</th></tr>
6 <tr>
7 <td>Display math mode</td>
8 <td>y = ax^2 + bx + c</td>
9 <td>
10
11 $$
12 y = ax^2 + bx + c
13 $$
14 </td></tr>
15
16 <tr>
17 <td>Subscript and superscript</td>
18 <td>x_1 + y^2 + x_2^3 + a^{b^c} = 0</td>
19 <td>
20
21 $$
22 x_1 + y^2 + x_2^3 + a^{b^c} = 0
23 $$
24 </td></tr>
25
26 <tr>
27 <td>Fraction</td>
28 <td>a) \frac{23}{45}
29 b) \frac{x + y^2 - z^3 }{\frac{12}{3} + 3}</td>
30 <td>
31 a.
32
33 $$
34 \frac{23}{45}
35 $$
36 b.
37 $$
38 \frac{x + y^2 - z^3 }{\frac{12}{3} + 3}
39 $$

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40 </td></tr>
41
42 <tr>
43 <td>n-th root</td>
44 <td>\sqrt{x} + \sqrt{\frac{y}{z + a}} + \sqrt[5]{\frac{1}{b^2}}</td>
45 <td>
46
47 $$
48 \sqrt{x} + \sqrt{\frac{y}{z + a}} + \sqrt[5]{\frac{1}{b^2}}
49 $$
50 </td></tr>
51
52 <tr>
53 <td>Sum and product</td>
54 <td>\sum_{i=1}^{10} x_i + \prod_{j=1}^5 y_j = 0</td>
55 <td>
56
57 $$
58 \sum_{i=1}^{10} x_i + \prod_{j=1}^5 y_j = 0
59 $$
60 </td></tr>
61
62 <tr>
63 <td>Size in Fraction (and inline math mode)</td>
64 <td>\frac{\frac{12}{5} - 2}{5 + \frac{43}{5}} -
65 \frac{\displaystyle \frac{12}{5} - 2}{\displaystyle 5 + \frac{43}{5}}
66 = 0</td>
67 <td>
68
69 $$
70 \frac{\frac{12}{5} - 2}{5 + \frac{43}{5}} -
71 \frac{\displaystyle \frac{12}{5} - 2}{\displaystyle 5 + \frac{43}{5}}
72 = 0
73 $$
74 </td></tr>
75
76 <tr>

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77 <td>Special functions</td>
78 <td>\sin x \ne sin x</td>
79 <td>
80
81 $$
82 \sin x \ne sin x
83 $$
84 </td></tr>
85
86 <tr>
87 <td>Matrix</td>
88 <td>a)
89 \begin{matrix}
90 1 & x & \sin y \\
91 e^{-z} & 4.97 \times 10^5 & \pm \sqrt{40132} \\
92 \sin\theta & \cos\theta & \tan\theta
93 \end{matrix}
94 b)
95 \begin{matrix}
96 1 & 2 & 3 \\
97 4 & 5 & 6 \\
98 7 & 8 & 9
99 \end{matrix}
100 </td>
101 <td>
102 a.
103
104 $$
105 \begin{matrix}
106 1 & x & \sin y \\
107 e^{-z} & 4.97 \times 10^5 & \pm \sqrt{40132} \\
108 \sin\theta & \cos\theta & \tan\theta
109 \end{matrix}
110 $$
111
112 b.
113 $$
114 \begin{matrix}
115 1 & 2 & 3 \\
116 4 & 5 & 6 \\
117 7 & 8 & 9

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118 \end{matrix}
119 $$
120 </td></tr>
121
122 <tr>
123 <td>Unit Matrix</td>
124 <td>\begin{matrix}
125 1 & 0 & 0 \\
126 0 & 1 & 0 \\
127 0 & 0 & 1
128 \end{matrix}
129 </td>
130 <td>
131
132 $$
133 \begin{matrix}
134 1 & 0 & 0 \\
135 0 & 1 & 0 \\
136 0 & 0 & 1
137 \end{matrix}
138 $$
139 </td></tr>
140
141 <tr>
142 <td>Parantheses & Brackets</td>
143 <td>(\frac{1}{2}) - \left( \frac{1}{2} \right) = 0</td>
144 <td>
145
146 $$
147 (\frac{1}{2}) - \left( \frac{1}{2} \right) = 0
148 $$
149 </td></tr>
150
151 <tr>
152 <td>Nested</td>
153 <td>\log \left[ 1 + \left( \frac{x + \sin y}{z} - \right. \right.
154 \left. \left. \sqrt{a} \right)^b \right]</td>
155 <td>
156
157 $$
158 \log \left[ 1 + \left( \frac{x + \sin y}{z} - \right. \right.

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159 \sqrt{a} \right)^b \right]
160 $$
161 </td></tr>
162
163 <tr>
164 <td>Operators & Symbols</td>
165 <td>\cdot \times \pm \mp \alpha \beta \rightarrow</td>
166 <td>
167
168 $$
169 \cdot \times \pm \mp \alpha \beta \rightarrow
170 $$
171 </td></tr>
172
173 <tr>
174 <td>Vectors & Matrix</td>
175 <td>\vec{u} \otimes \vec{v} = \mathbf{M}</td>
176 <td>
177
178 $$
179 \vec{u} \otimes \vec{v} = \mathbf{M}
180 $$
181 </td></tr>
182
183
184 </table>
185 </div>
186

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