	EXACT VALUES FOR THE SIN OF ALL INTEGERS....BY JAMES T. PARENT
0	0
1	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{384}\sqrt{6}\,(\sqrt{5}-1)(3+\sqrt{3})+\frac{1}{192}\sqrt{3}\,(3-\sqrt{3})\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}\,(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}\,(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{384}\sqrt{6}\,(\sqrt{5}-1)(3+\sqrt{3})+\frac{1}{192}\sqrt{3}\,(3-\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}\,(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}\,(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
2	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
3	$\frac{1}{48}\sqrt{6}\,(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}\,(3-\sqrt{3})\sqrt{5+\sqrt{5}}$
4	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
5	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1-\frac{1}{3}\sqrt{3}\right)+\frac{1}{32}I\sqrt{-6\left(1-\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1-\frac{1}{3}\sqrt{3}\right)-\frac{1}{32}I\sqrt{-6\left(1-\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$
6	$\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}$
7	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}+\frac{1}{128}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}+\frac{1}{128}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
8	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
9	$\frac{1}{8}\sqrt{2}\,(1+\sqrt{5})-\frac{1}{8}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}$
10	$-\frac{1}{8}(-4+4I\sqrt{3})^{\left(\frac{1}{3}\right)}(1+I\sqrt{3})-\frac{1}{8}(-4-4I\sqrt{3})^{\left(\frac{1}{3}\right)}(1-I\sqrt{3})$
11	$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\frac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\frac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\frac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\frac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
12	$\frac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)$
13	$\frac{1}{2}\mathrm{sqrt}\left(2+2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $\left.+2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$
14	$\frac{1}{2}\mathrm{sqrt}\left(2+2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $\left.+2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$

15	$$\frac{1}{4}\sqrt{2}\,(\sqrt{3}-1) \qquad \text{or} \qquad -\frac{1}{2}\left(\left(-\frac{1}{16}+\frac{1}{16}I\right)\sqrt{2}\right)^{\left(\frac{1}{3}\right)}(1+I\sqrt{3})-\frac{1}{2}\left(\left(-\frac{1}{16}-\frac{1}{16}I\right)\sqrt{2}\right)^{\left(\frac{1}{3}\right)}(1-I\sqrt{3})$$
16	$$\frac{1}{2}\mathrm{sqrt}\left(2-2\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$$ $$\left.-2\left(-\frac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$$
17	$$\frac{1}{2}\mathrm{sqrt}\left(2-2\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$$ $$\left.-2\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$$
18	$$\frac{1}{4}\sqrt{5}-\frac{1}{4}$$
19	$$\frac{1}{2}\mathrm{sqrt}\left(2-2\left(-\frac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$$ $$\left.-2\left(-\frac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\frac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$$
20	$$-\frac{1}{8}(-4\sqrt{3}+4I)^{\left(\frac{1}{3}\right)}(1+I\sqrt{3})-\frac{1}{8}(-4\sqrt{3}-4I)^{\left(\frac{1}{3}\right)}(1-I\sqrt{3})$$
21	$$\frac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})$$
22	$$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}-\frac{1}{64}\sqrt{5}+\frac{1}{128}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right.$$ $$\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}+\frac{1}{8}\sqrt{5}-\frac{1}{16}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\right.$$ $$-\frac{1}{64}\sqrt{5}+\frac{1}{128}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}$$ $$\left.-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}+\frac{1}{8}\sqrt{5}-\frac{1}{16}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$$
23	$$\frac{1}{2}\mathrm{sqrt}\left(2-2\left(-\frac{1}{16}\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{9-\sqrt{5}+\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}}\right.\right.$$ $$\left.+\frac{1}{8}\sqrt{\frac{1}{4}\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2(9-\sqrt{5}+\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3})-1}\right)^{\left(\frac{1}{3}\right)}$$ $$-2\left(-\frac{1}{16}\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{9-\sqrt{5}+\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}}\right.$$ $$\left.\left.-\frac{1}{8}\sqrt{\frac{1}{4}\left(\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2(9-\sqrt{5}+\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3})-1}\right)^{\left(\frac{1}{3}\right)}\right)$$
24	$$\frac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\frac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}$$
25	$$\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1+\frac{1}{3}\sqrt{3}\right)+\frac{1}{32}I\sqrt{-6\left(1+\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$$ $$+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1+\frac{1}{3}\sqrt{3}\right)-\frac{1}{32}I\sqrt{-6\left(1+\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$$

26	$\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(\dfrac{1}{64}-\dfrac{1}{64}\sqrt{5}-\dfrac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\dfrac{1}{8}I\sqrt{-\left(-\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}+\dfrac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(\dfrac{1}{64}-\dfrac{1}{64}\sqrt{5}-\dfrac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\dfrac{1}{8}I\sqrt{-\left(-\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}+\dfrac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
27	$\dfrac{1}{4}\sqrt{5+\sqrt{5}}-\dfrac{1}{8}\sqrt{2}\,(\sqrt{5}-1)$
28	$\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right.$ $\left.+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}+\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})\right.$ $\left.-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
29	$\dfrac{1}{2}\,\mathrm{sqrt}\left(2-2\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $\left.-2\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$
30	$\dfrac{1}{2}$
31	$\dfrac{1}{2}\,\mathrm{sqrt}\left(2-2\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\right.$ $\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}-$ $2\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)$ $\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$
32	$\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
33	$\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\dfrac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}$
34	$\left(\dfrac{1}{64}-\dfrac{1}{64}\sqrt{5}-\dfrac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\dfrac{1}{8}I\sqrt{-\left(-\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}+\dfrac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(\dfrac{1}{64}-\dfrac{1}{64}\sqrt{5}-\dfrac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\dfrac{1}{8}I\sqrt{-\left(-\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}+\dfrac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
35	$\left(-\dfrac{1}{32}\sqrt{6}\left(1+\dfrac{1}{3}\sqrt{3}\right)+\dfrac{1}{32}I\sqrt{-6\left(1+\dfrac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}+\left(-\dfrac{1}{32}\sqrt{6}\left(1+\dfrac{1}{3}\sqrt{3}\right)-\dfrac{1}{32}I\sqrt{-6\left(1+\dfrac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$
36	$\dfrac{1}{8}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}$

37	$\frac{1}{8}\left(-4\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-4\sqrt{2}\sqrt{5}+4\sqrt{5}\sqrt{5+\sqrt{5}}-4\sqrt{2}-4\sqrt{5+\sqrt{5}}-4\sqrt{2}\sqrt{5}\sqrt{3}-4\sqrt{2}\sqrt{3}+4\sqrt{5+\sqrt{5}}\sqrt{3}\right.$ $\left.+16I\sqrt{\sqrt{3}-\sqrt{5}\sqrt{3}-\sqrt{2}\sqrt{5+\sqrt{5}}+8}\right)^{\left(\frac{1}{3}\right)}+\frac{1}{8}\left(-4\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-4\sqrt{2}\sqrt{5}+4\sqrt{5}\sqrt{5+\sqrt{5}}-4\sqrt{2}-4\sqrt{5+\sqrt{5}}-4\sqrt{2}\sqrt{5}\sqrt{3}-4\sqrt{2}\sqrt{3}\right.$ $\left.+4\sqrt{5+\sqrt{5}}\sqrt{3}-16I\sqrt{\sqrt{3}-\sqrt{5}\sqrt{3}-\sqrt{2}\sqrt{5+\sqrt{5}}+8}\right)^{\left(\frac{1}{3}\right)}$
38	$\left(-\frac{1}{64}-\frac{1}{64}\sqrt{5}+\frac{1}{128}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right.$ $\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}+\frac{1}{8}\sqrt{5}-\frac{1}{16}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}+\left(-\frac{1}{64}-\frac{1}{64}\sqrt{5}+\frac{1}{128}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right.$ $\left.-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}+\frac{1}{8}\sqrt{5}-\frac{1}{16}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
39	$\frac{1}{32}\sqrt{2}\left(2\sqrt{3}(1+\sqrt{5})+\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+2+2\sqrt{5}\right)$
40	$\frac{1}{4}\left(-\frac{1}{8}(-4\sqrt{3}+4I)^{\left(\frac{1}{3}\right)}(1+I\sqrt{3})-\frac{1}{8}(-4\sqrt{3}-4I)^{\left(\frac{1}{3}\right)}(1-I\sqrt{3})\right)2^{\left(\frac{2}{3}\right)}\left((\sqrt{2}(-\sqrt{3}-1+I\sqrt{3}-I))^{\left(\frac{1}{3}\right)}+(-\sqrt{2}(\sqrt{3}+1+I\sqrt{3}-I))^{\left(\frac{1}{3}\right)}\right)$ $\left((\sqrt{2}(-\sqrt{3}+1+I\sqrt{3}+I))^{\left(\frac{1}{3}\right)}+(-\sqrt{2}(\sqrt{3}-1+I\sqrt{3}+I))^{\left(\frac{1}{3}\right)}\right)$
41	$\frac{1}{2}\text{sqrt}\left(2-2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\right.$ $\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})+\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})-\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}-2$ $\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)$ $\left.\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})+\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})-\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$
42	$\frac{1}{32}\left((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5})\right)\sqrt{\sqrt{3}\sqrt{5}-\sqrt{3}+\sqrt{2}\sqrt{5+\sqrt{5}}+8}$
43	$\left(-\frac{1}{128}\sqrt{2}\sqrt{3}+\frac{1}{128}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{128}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{128}\sqrt{2}\sqrt{5}+\frac{1}{128}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}+\frac{1}{128}\sqrt{2}\right.$ $\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{2}\sqrt{3}-\frac{1}{16}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}\sqrt{5}-\frac{1}{16}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}-\frac{1}{16}\sqrt{2}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{128}\sqrt{2}\sqrt{3}+\frac{1}{128}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{128}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{128}\sqrt{2}\sqrt{5}+\frac{1}{128}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}+\frac{1}{128}\sqrt{2}\right.$ $\left.-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{2}\sqrt{3}-\frac{1}{16}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{16}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}\sqrt{5}-\frac{1}{16}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}-\frac{1}{16}\sqrt{2}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$

44	$\left(-\dfrac{1}{16}\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{9-\sqrt{5}+\sqrt{2}\,\sqrt{5+\sqrt{5}}\,\sqrt{3}}\right.$ $\left. +\dfrac{1}{16}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2(9-\sqrt{5}+\sqrt{2}\,\sqrt{5+\sqrt{5}}\,\sqrt{3})+4}\right)^{\left(\frac{1}{3}\right)}+\left(\right.$ $-\dfrac{1}{16}\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{9-\sqrt{5}+\sqrt{2}\,\sqrt{5+\sqrt{5}}\,\sqrt{3}}$ $\left. -\dfrac{1}{16}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2(9-\sqrt{5}+\sqrt{2}\,\sqrt{5+\sqrt{5}}\,\sqrt{3})+4}\right)^{\left(\frac{1}{3}\right)}$
45	$\dfrac{1}{2}\sqrt{2}$
46	$\left(-\dfrac{1}{256}((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5}))\sqrt{\sqrt{3}\,\sqrt{5}-\sqrt{3}+\sqrt{2}\,\sqrt{5+\sqrt{5}}+8}\right.$ $\left. +\dfrac{1}{256}I\sqrt{-((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5}))^2(\sqrt{3}\,\sqrt{5}-\sqrt{3}+\sqrt{2}\,\sqrt{5+\sqrt{5}}+8)+1024}\right)^{\left(\frac{1}{3}\right)}+\left(\right.$ $-\dfrac{1}{256}((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5}))\sqrt{\sqrt{3}\,\sqrt{5}-\sqrt{3}+\sqrt{2}\,\sqrt{5+\sqrt{5}}+8}$ $\left. -\dfrac{1}{256}I\sqrt{-((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5}))^2(\sqrt{3}\,\sqrt{5}-\sqrt{3}+\sqrt{2}\,\sqrt{5+\sqrt{5}}+8)+1024}\right)^{\left(\frac{1}{3}\right)}$
47	$\left(-\dfrac{1}{256}\sqrt{2}\,(2\sqrt{3}\,(1+\sqrt{5})+\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+2+2\sqrt{5})\right.$ $\left. +\dfrac{1}{256}I\sqrt{-2(2\sqrt{3}\,(1+\sqrt{5})+\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+2+2\sqrt{5})^2+1024}\right)^{\left(\frac{1}{3}\right)}+\left(\right.$ $-\dfrac{1}{256}\sqrt{2}\,(2\sqrt{3}\,(1+\sqrt{5})+\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+2+2\sqrt{5})$ $\left. -\dfrac{1}{256}I\sqrt{-2(2\sqrt{3}\,(1+\sqrt{5})+\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+2+2\sqrt{5})^2+1024}\right)^{\left(\frac{1}{3}\right)}$
48	$\dfrac{1}{2}\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{9-\sqrt{5}+\sqrt{2}\,\sqrt{5+\sqrt{5}}\,\sqrt{3}}$
49	$\left(-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\dfrac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\dfrac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\dfrac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\dfrac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
50	$\left(-\dfrac{1}{16}+\dfrac{1}{16}I\sqrt{3}\right)^{\left(\frac{1}{3}\right)}+\left(-\dfrac{1}{16}-\dfrac{1}{16}I\sqrt{3}\right)^{\left(\frac{1}{3}\right)}$
51	$\dfrac{1}{16}\sqrt{2}\,\sqrt{3}-\dfrac{1}{16}\sqrt{5+\sqrt{5}}\,\sqrt{3}+\dfrac{1}{16}\sqrt{5}\,\sqrt{3}\,\sqrt{5+\sqrt{5}}+\dfrac{1}{16}\sqrt{5}\,\sqrt{5+\sqrt{5}}-\dfrac{1}{16}\sqrt{2}\,\sqrt{5}-\dfrac{1}{16}\sqrt{5+\sqrt{5}}+\dfrac{1}{16}\sqrt{2}\,\sqrt{5}\,\sqrt{3}-\dfrac{1}{16}\sqrt{2}$
52	$\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$

53	$\left(-\frac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}+\frac{1}{128}\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5})\right.$ $\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}+\left(-\frac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}\right.$ $\left.+\frac{1}{128}\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5})-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{16}\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
54	$\frac{1}{4}+\frac{1}{4}\sqrt{5}$
55	$\frac{1}{4}2^{\left(\frac{1}{3}\right)}(\sqrt{2}(-\sqrt{3}+1+I\sqrt{3}+I))^{\left(\frac{1}{3}\right)}+\frac{1}{4}2^{\left(\frac{1}{3}\right)}(-\sqrt{2}(\sqrt{3}-1+I\sqrt{3}+I))^{\left(\frac{1}{3}\right)}$
56	$\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}(\sqrt{5}-1)+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}+\frac{1}{64}\sqrt{3}(\sqrt{5}-1)-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}-\frac{1}{8}\sqrt{3}(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
57	$\left(-\frac{1}{64}\sqrt{2}(1+\sqrt{5})+\frac{1}{64}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}(1+\sqrt{5})-\frac{1}{8}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{64}\sqrt{2}(1+\sqrt{5})+\frac{1}{64}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}(1+\sqrt{5})-\frac{1}{8}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
58	$\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $+\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
59	$\left(-\frac{1}{384}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})+\frac{1}{192}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right.$ $\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}+\left(-\frac{1}{384}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})\right.$ $\left.+\frac{1}{192}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
60	$\frac{1}{2}\sqrt{3}$
61	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{384}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})+\frac{1}{192}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right.$ $\left.+\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(\right.$ $-\frac{1}{384}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})+\frac{1}{192}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}$ $\left.-\frac{1}{8}I\sqrt{-\left(\frac{1}{48}\sqrt{6}(\sqrt{5}-1)(3+\sqrt{3})-\frac{1}{24}\sqrt{3}(3-\sqrt{3})\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$

62	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{64}+\dfrac{1}{64}\sqrt{5}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}-\dfrac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{128}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{64}+\dfrac{1}{64}\sqrt{5}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{6}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}-\dfrac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
63	$-\dfrac{1}{8}\sqrt{2}+\dfrac{1}{4}\sqrt{5+\sqrt{5}}+\dfrac{1}{8}\sqrt{2}\,\sqrt{5}$
64	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\dfrac{1}{64}\sqrt{3}\,(\sqrt{5}-1)+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\dfrac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{2}\,\sqrt{5+\sqrt{5}}+\dfrac{1}{64}\sqrt{3}\,(\sqrt{5}-1)-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{2}\,\sqrt{5+\sqrt{5}}-\dfrac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
65	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{32}\sqrt{6}\left(1-\dfrac{1}{3}\sqrt{3}\right)+\dfrac{1}{32}I\sqrt{-6\left(1-\dfrac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{32}\sqrt{6}\left(1-\dfrac{1}{3}\sqrt{3}\right)-\dfrac{1}{32}I\sqrt{-6\left(1-\dfrac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$
66	$\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}-\dfrac{1}{16}\sqrt{2}\,\sqrt{3}\,\sqrt{5+\sqrt{5}}+\dfrac{1}{16}\sqrt{2}\,\sqrt{5}\,\sqrt{3}\,\sqrt{5+\sqrt{5}}$
67	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}+\dfrac{1}{128}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right.$ $\left.+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\dfrac{1}{16}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(\right.$ $\left.-\dfrac{1}{128}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}+\dfrac{1}{128}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right.$ $\left.-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}(\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\dfrac{1}{16}\sqrt{2}\,(\sqrt{3}-1)(1+\sqrt{5})\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
68	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{64}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
69	$\dfrac{1}{2}\sqrt{2}\left(\dfrac{1}{8}+\dfrac{1}{8}\sqrt{5}-\dfrac{1}{16}\sqrt{2}\,\sqrt{3}\,\sqrt{5+\sqrt{5}}+\dfrac{1}{16}\sqrt{2}\,\sqrt{5}\,\sqrt{3}\,\sqrt{5+\sqrt{5}}\right)+\dfrac{1}{2}\left(\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})-\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)\sqrt{2}$
70	$\dfrac{1}{8}2^{\left(\frac{2}{3}\right)}\left(\left(\sqrt{2}\,(-\sqrt{3}-1+I\sqrt{3}-I)\right)^{\left(\frac{1}{3}\right)}+(-\sqrt{2}\,(\sqrt{3}+1+I\sqrt{3}-I))^{\left(\frac{1}{3}\right)}\right)\left(\left(\sqrt{2}\,(-\sqrt{3}+1+I\sqrt{3}+I)\right)^{\left(\frac{1}{3}\right)}+(-\sqrt{2}\,(\sqrt{3}-1+I\sqrt{3}+I))^{\left(\frac{1}{3}\right)}\right)$
71	$-\left(-\dfrac{1}{2}+\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\dfrac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}+\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\dfrac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\dfrac{1}{2}-\dfrac{1}{2}I\sqrt{3}\right)\left(-\dfrac{1}{128}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})-\dfrac{1}{64}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}-\dfrac{1}{8}I\sqrt{-\left(\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)(1+\sqrt{3})+\dfrac{1}{8}(\sqrt{3}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
72	$\dfrac{1}{4}\sqrt{2}\,\sqrt{5+\sqrt{5}}$ $\dfrac{1}{4}\sqrt{10+2\sqrt{5}}$

73	$\frac{1}{2}\,\mathrm{sqrt}\Bigg(2 + 2\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}} + \frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)\right.$ $\left.+ \frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}} - \frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}$ $+ 2\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}} + \frac{1}{64}\sqrt{3}\,(\sqrt{5}-1)\right.$ $\left.-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}} - \frac{1}{8}\sqrt{3}\,(\sqrt{5}-1)\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}\Bigg)$
74	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{256}((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}} - \sqrt{2}(\sqrt{3}-1)(1+\sqrt{5}))\sqrt{\sqrt{5}\sqrt{3}-\sqrt{3}+\sqrt{2}\sqrt{5+\sqrt{5}}+8}\right.$ $\left.+\frac{1}{256}I\sqrt{-((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5}))^2(\sqrt{5}\sqrt{3}-\sqrt{3}+\sqrt{2}\sqrt{5+\sqrt{5}}+8)+1024}\right)^{\left(\frac{1}{3}\right)} - \left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\bigg($ $-\frac{1}{256}((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5}))\sqrt{\sqrt{5}\sqrt{3}-\sqrt{3}+\sqrt{2}\sqrt{5+\sqrt{5}}+8}$ $-\frac{1}{256}I\sqrt{-((\sqrt{5}-1)(1+\sqrt{3})\sqrt{5+\sqrt{5}}-\sqrt{2}(\sqrt{3}-1)(1+\sqrt{5}))^2(\sqrt{5}\sqrt{3}-\sqrt{3}+\sqrt{2}\sqrt{5+\sqrt{5}}+8)+1024}\bigg)^{\left(\frac{1}{3}\right)}$
75	$\frac{1}{4}\sqrt{2}\,(1+\sqrt{3})$
76	$\frac{1}{2}\,\mathrm{sqrt}\Bigg(2 - 2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} + \frac{1}{64} + \frac{1}{64}\sqrt{5} + \frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} - \frac{1}{8} - \frac{1}{8}\sqrt{5}\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}$ $- 2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} + \frac{1}{64} + \frac{1}{64}\sqrt{5} - \frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} - \frac{1}{8} - \frac{1}{8}\sqrt{5}\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}\Bigg)$
77	$\frac{1}{2}\,\mathrm{sqrt}\Bigg(2 - 2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}} + \frac{1}{64}\sqrt{3}(\sqrt{5}-1) + \frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}} - \frac{1}{8}\sqrt{3}(\sqrt{5}-1)\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}$ $- 2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}} + \frac{1}{64}\sqrt{3}(\sqrt{5}-1) - \frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}} - \frac{1}{8}\sqrt{3}(\sqrt{5}-1)\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}\Bigg)$
78	$-\frac{1}{8} + \frac{1}{8}\sqrt{5} + \frac{1}{8}\sqrt{2}\sqrt{3}\sqrt{5+\sqrt{5}}$
79	$\frac{1}{2}\,\mathrm{sqrt}\Bigg(2 - 2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5}) + \frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} + \frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5}) - \frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}$ $- 2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5}) + \frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}} - \frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5}) - \frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2 + 1}\right)^{\left(\frac{1}{3}\right)}\Bigg)$
80	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{16}\sqrt{3} + \frac{1}{16}I\right)^{\left(\frac{1}{3}\right)} - \left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{16}\sqrt{3} - \frac{1}{16}I\right)^{\left(\frac{1}{3}\right)}$
81	$-\frac{1}{8}\sqrt{5+\sqrt{5}} + \frac{1}{8}\sqrt{5}\sqrt{5+\sqrt{5}} + \frac{1}{8}\sqrt{2}\sqrt{5} + \frac{1}{8}\sqrt{2}$

DEGREES	SIN (DEGREES)
82	$\left(-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}\ldots\right.$ $\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)\left(\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $+\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{64}+\frac{1}{64}\sqrt{5}-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{6}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}-\frac{1}{8}\sqrt{5}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
83	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}+\frac{1}{128}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}-\frac{1}{128}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}-\frac{1}{128}\sqrt{2}\sqrt{3}\right.$ $+\frac{1}{128}\sqrt{5+\sqrt{5}}\sqrt{3}$ $+\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}-\frac{1}{16}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}+\frac{1}{16}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{3}-\frac{1}{16}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}-$ $\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{128}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}+\frac{1}{128}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}-\frac{1}{128}\sqrt{5+\sqrt{5}}-\frac{1}{128}\sqrt{2}\sqrt{5}\sqrt{3}-\frac{1}{128}\sqrt{2}\sqrt{3}+\frac{1}{128}\sqrt{5+\sqrt{5}}\sqrt{3}\right.$ $-\frac{1}{8}I\sqrt{-\left(\frac{1}{16}\sqrt{5}\sqrt{3}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}-\frac{1}{16}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}+\frac{1}{16}\sqrt{5+\sqrt{5}}+\frac{1}{16}\sqrt{2}\sqrt{5}\sqrt{3}+\frac{1}{16}\sqrt{2}\sqrt{3}-\frac{1}{16}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
84	$\dfrac{1}{8}\sqrt{3}\,(1+\sqrt{5})+\dfrac{1}{16}\sqrt{2}\,(\sqrt{5}-1)\sqrt{5+\sqrt{5}}$
85	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1+\frac{1}{3}\sqrt{3}\right)+\frac{1}{32}I\sqrt{-6\left(1+\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{32}\sqrt{6}\left(1+\frac{1}{3}\sqrt{3}\right)-\frac{1}{32}I\sqrt{-6\left(1+\frac{1}{3}\sqrt{3}\right)^2+16}\right)^{\left(\frac{1}{3}\right)}$
86	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(\frac{1}{64}-\frac{1}{64}\sqrt{5}-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}+\frac{1}{8}I\sqrt{-\left(-\frac{1}{8}+\frac{1}{8}\sqrt{5}+\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(\frac{1}{64}-\frac{1}{64}\sqrt{5}-\frac{1}{64}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}-\frac{1}{8}I\sqrt{-\left(-\frac{1}{8}+\frac{1}{8}\sqrt{5}+\frac{1}{8}\sqrt{2}\sqrt{5+\sqrt{5}}\sqrt{3}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
87	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(\frac{1}{64}\sqrt{5+\sqrt{5}}-\frac{1}{64}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{64}\sqrt{2}\sqrt{5}-\frac{1}{64}\sqrt{2}+\frac{1}{8}I\sqrt{-\left(-\frac{1}{8}\sqrt{5+\sqrt{5}}+\frac{1}{8}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{8}\sqrt{2}\sqrt{5}+\frac{1}{8}\sqrt{2}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(\frac{1}{64}\sqrt{5+\sqrt{5}}-\frac{1}{64}\sqrt{5}\sqrt{5+\sqrt{5}}-\frac{1}{64}\sqrt{2}\sqrt{5}-\frac{1}{64}\sqrt{2}-\frac{1}{8}I\sqrt{-\left(-\frac{1}{8}\sqrt{5+\sqrt{5}}+\frac{1}{8}\sqrt{5}\sqrt{5+\sqrt{5}}+\frac{1}{8}\sqrt{2}\sqrt{5}+\frac{1}{8}\sqrt{2}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
88	$-\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$ $-\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}$
89	$\frac{1}{2}\mathrm{sqrt}\left(2-2\left(-\frac{1}{2}+\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}+\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right.$ $\left.-2\left(-\frac{1}{2}-\frac{1}{2}I\sqrt{3}\right)\left(-\frac{1}{64}\sqrt{3}(1+\sqrt{5})-\frac{1}{128}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}-\frac{1}{8}I\sqrt{-\left(\frac{1}{8}\sqrt{3}(1+\sqrt{5})+\frac{1}{16}\sqrt{2}(\sqrt{5}-1)\sqrt{5+\sqrt{5}}\right)^2+1}\right)^{\left(\frac{1}{3}\right)}\right)$
90	**1**

EXACT VALUES FOR THE SIN OF ALL INTEGERS….BY JAMES T. PARENT