

tesseracont — A new LaTeX package*

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Abstract

A simple package to write tesseracont numbers in L^AT_EX (and possibly T_EX).

1 Usage

`\tesseracont` The only user macro for this package is `\tesseracont{⟨base 10 number⟩}`. It converts numbers from base 10 into base tesseracont like so:


Base 10	Base tesseracont
TODO	(this in TikZ, tables don't like loops!)

2 Implementation


```
1 \langle*package\rangle
2 \RequirePackage{xparse}
3 \RequirePackage{tikz}
4 \tikzset{
5   pics/carc/.style args={#1:#2:#3}{
6     code={
7       \draw[pic actions] (#1:#3) arc(#1:#2:#3);
8     }
9   }
10 }
```

`\tesseracont@dodec` An internal helper macro to calculate a dodecadent (like quadrant, but with twelve).


```
11 \def\tesseracont@dodec#1{{90+(30*(#1-1))}}
```

`\tesseracont@one` Representation of the number 1 in base tesseracont .

```
12 \NewDocumentCommand\tesseracont@one{}{%
13   \draw[white] (0,0) circle (0pt) pic[black]{%
14     carc=\tesseracont@dodec{2}:\tesseracont@dodec{7}:6pt};%
15   \draw[white] (0,0) circle (0pt) pic[black,line width={6pt*0.2}]{%
16     carc=\tesseracont@dodec{2}:\tesseracont@dodec{4}:{6pt*0.9}};%
17 }
```

`\tesseracont@two` Representation of the number 2 in base tesseracont .

```
18 \NewDocumentCommand\tesseracont@two{}{%
19   \draw[white] (0,0) circle (0pt) pic[black]{carc=\tesseracont@dodec{7}:\tesseracont@dodec{2+1}
20   \draw[white] (0,0) circle (0pt) pic[black,line width={6pt*0.2}]{carc=\tesseracont@dodec{7}:\tesseracont@dodec{4}+1}
21 }
```

`\tesseracont@three` Representation of the number 3 in base tesseracont .

```
22 \NewDocumentCommand\tesseracont@three{}{%
23   \draw[white] (0,0) circle (0pt) pic[black]{carc=\tesseracont@dodec{3}:\tesseracont@dodec{11}
24   \draw[white] (0,0) circle (0pt) pic[black,line width={6pt*0.2}]{carc=\tesseracont@dodec{3}:\tesseracont@dodec{8}+1}
25   \draw[white] (0,0) circle (0pt) pic[black,line width={6pt*0.2}]{carc=\tesseracont@dodec{8}:\tesseracont@dodec{11}+1}
26 }
```

*This file describes version v1.00, last revised 2018/02/18.

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`\tesseracont@four` Representation of the number 4 in base tesseracont \bigcirc .

```

27 \NewDocumentCommand{\tesseracont@four}{*}{
28   \draw[white] (0,0) circle (0pt) pic[black]{carc=\tesseracont@dodec{8}:\tesseracont@dodec{6+1}
29   \draw[white] (0,0) circle (0pt) pic[black,line width={6pt*0.2}]{carc=\tesseracont@dodec{0}:\tesseracont@dodec{6+1}
30 }

```

`\tesseracont@five` Representation of the number 5 in base tesseracont \bigcirc .

```

31 \NewDocumentCommand{\tesseracont@five}{*}{
32   \draw[black] (0,0) circle ({6pt*0.5});
33 }

```

`\tesseracont@ten` Representation of the number 10 in base tesseracont \bigcirc .

```

34 \NewDocumentCommand{\tesseracont@ten}{*}{
35   \draw[white] (0,0) circle (0pt) pic[black]{carc=\tesseracont@dodec{2}:\tesseracont@dodec{8}:
36   \draw[black] (0,0) -- ++(\tesseracont@dodec{2}:6pt);
37 }

```

`\tesseracont@fifteen` Representation of the number 15 in base tesseracont \bigcirc .

```

38 \NewDocumentCommand{\tesseracont@fifteen}{*}{
39   \draw[white] (0,0) circle (0pt) pic[black]{carc=0:180:6pt};
40   \draw[black] ({6pt*0.3},0) -- ++(0:{6pt*0.7});
41 }

```

```

42 \endinput
43 \</package>

```

3 Change History

v1.00

General: First public release 1

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