

- Function: Octonion:-setup - the initialization procedure for the package 'Octonion'

Calling Sequence:

none

Parameters:

none

- Description:

- Procedure 'setup' is the initialization procedure for the 'Octonion' package. It is executed automatically when the package is loaded.
- At the time of loading, the following are defined:
 - `&o` - infix form for [omul](#), the octonionic multiplication
 - `_octbasis = [Id, e1, e2, e3, e4, e5, e6, e7]` - standard octonion basis as Maple global variable in `Cl(0,7)`
 - `_pureoctbasis = [e1, e2, e3, e4, e5, e6, e7]` - pure octonion basis as Maple global variable in `Cl(0,7)`
 - `_default_Fano_triples = [[1,3,7],[1,2,4],[1,5,6],[2,3,5],[2,6,7],[3,4,6],[4,5,7]]` - default Fano triples that define octonionic multiplication
 - `_default_squares = [-Id, -Id, -Id, -Id, -Id, -Id, -Id]` - default squares of the pure octonionic basis
- To see all environmental variables that are defined and used by 'CLIFFORD', use procedure [Clifford:-CLIFFORD_ENV](#).
- All procedures and types in 'Octonion' are protected.

- Examples:

```
> restart:with(Clifford):with(Octonion):
> CLIFFORD_ENV();

`>>> Global variables defined in Clifford:-setup are now available and have the
se values: <<<`
`***** Start *****`
dim_V = 9
_default_Clifford_product = Clifford:-cmulNUM
_prolevel = false
_shortcut_in_minimalideal = true
_shortcut_in_Kfield = true
_shortcut_in_spinorKbasis = true
_shortcut_in_spinorKrepr = true
_warnings_flag = true
_scalartypes = {constant, RootOf, ```, complex, indexed, numeric, function, rat
ional, mathfunc}
_quatbasis = [[Id, e3we2, e1we3, e2we1], {`Maple has assigned qi:=-e2we3, qj:=e
1we3, qk:=-e1we2`}]
```

```
`***** End *****`
```

Clipplus has been loaded. Definitions for type/climon and type/clipolynom now include &C and &C[K]. Type ?cliprod for help.

```
`>>> Global variables defined in Clipplus:-setup are now available and have these values: <<<`
```

```
`***** Start *****`
```

```
macro(Clifford:-cmul = climul)
macro(Clifford:-cmulQ = climul)
macro(`&c` = climul)
macro(`&cQ` = climul)
macro(Clifford:-reversion = clirev)
macro(Clifford:-LC = LCbig)
macro(Clifford:-RC = RCbig)
```

```
`Warning, new definitions for type/climon and type/clipolynom now include &C`
```

```
`***** End *****`
```

```
`***** Start *****`
```

```
`>>> There are no new global variables or macros in GTP yet. <<<`
```

```
`***** End *****`
```

```
`>>> Global variables defined in Octonion:-setup are now available and have these values: <<<`
```

```
`***** Start *****`
```

```
_octbasis = [Id, e1, e2, e3, e4, e5, e6, e7]
_pureoctbasis = [e1, e2, e3, e4, e5, e6, e7]
_default_Fano_triples = [[1, 3, 7], [1, 2, 4], [1, 5, 6], [2, 3, 5], [2, 6, 7],
[3, 4, 6], [4, 5, 7]]
_default_squares = [-Id, -Id, -Id, -Id, -Id, -Id, -Id]
_default_Clifford_product = Clifford:-cmulNUM
```

```
`***** End *****`
```

```
[ >
```

```
[ >
```

See Also: [`type/Fano_triples`](#), [omultable](#), [omul](#)

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