

Pensieve header: The charmed root function.

```
Unprotect[Power];

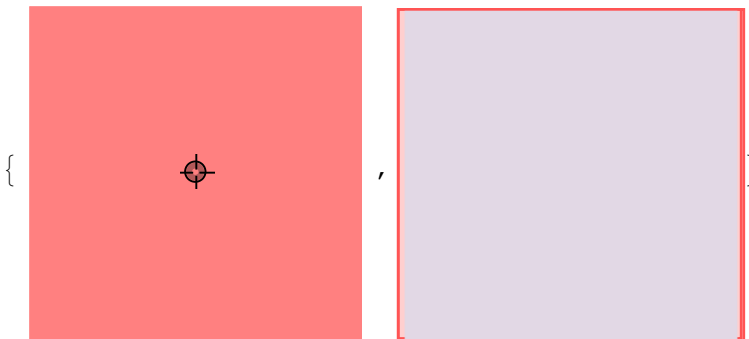
$$p\sqrt[n]{a} := \text{CharmedRoot}[p, n, a]$$

Protect[Power];
CharmedRoot[p_, n_, a_] := CharmedRoot[p, n] = MinimalBy[
  N[ $\sqrt[n]{a}$ ] Table[e2πik/n, {k, n}],
  Abs[# - CharmedRoot[p, n]] &
][[1]]
```

$$i\sqrt[3]{26}$$

-1.48125 - 2.5656 i

```
b = {{1, 1}/2};
{LocatorPane[Dynamic[b], Graphics[{Pink, Rectangle[{-1, -1}, {1, 1}]}]],
 Dynamic[Graphics[{LightBlue, Rectangle[{-1, -1}, {1, 1}], Black,
  Point[r =  $\sqrt[5]{b[[1, 1]] + i b[[1, 2]]}$ ; {Re[r], Im[r]}}], PlotRange -> {-1, 1}]]}
```



```
b1 = {{1, 1}/2};
{LocatorPane[Dynamic[b1], Graphics[{Pink, Rectangle[{-1, -1}, {1, 1}]}]],
 Dynamic[Graphics[{LightBlue, Rectangle[{-1, -1}, {1, 1}], Black,
  Point[r =  $\sqrt[5]{b1[[1, 1]] + i b1[[1, 2]]}$ ; {Re[r], Im[r]}}], PlotRange -> {-1, 1}]]}
```

