

```
1 | #lang racket
2 |
3 | (define (digi-sum n)
4 |   (if (= n 0)
5 |       0
6 |       (+ (expt (modulo n 10) 5)
7 |          (digi-sum (floor (/ n 10))))))
8 |
9 | (define (cond-val f n default)
10 |   (if (f n) n default))
11 |
12 | (define (solve-h n)
13 |   (cond
14 |     [(< n 10) 0]
15 |     [else (+ (cond-val (lambda (n) (= (digi-sum n) n))
16 |                        n
17 |                        0)
18 |              (solve-h (- n 1)))]))
19 |
20 | (define (solve) (solve-h 99999))
```