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=> # revnum Is procedure to REVerse the digits of a NUMber
=> with(StringTools) :
=> revnum :=proc(n);
    local a, b, c;
    description "to reverse the digits of an integer";
    with(StringTools) :
    a := convert(n, string);
    b := Reverse(a);
    c := convert(b, decimal, 10);
    end proc;
revnum := proc(n)
    local a, b, c;
    description "to reverse the digits of an integer";
    with(StringTools);
    a := convert(n, string);
    b := StringTools:-Reverse(a);
    c := convert(b, decimal, 10)
end proc
=> d := revnum(246);
                                     d := 642
=> # https://en.wikipedia.org/wiki/Lychrel_number
=>
=> f := 0 :
    e := 196 :
    count := 0 :
    while f ≠ e do
    e := e + f;
    f := revnum(e) :
    count := count + 1;
    end do;
                                     e := 196
                                     f := 691
                                     count := 1
                                     e := 887
                                     f := 788
                                     count := 2
                                     e := 1675
                                     f := 5761
                                     count := 3
                                     e := 7436
                                     f := 6347
                                     count := 4
                                     e := 13783
                                     f := 38731
                                     count := 5

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e := 52514
f := 41525
count := 6
e := 94039
f := 93049
count := 7
e := 187088
f := 880781
count := 8
e := 1067869
f := 9687601
count := 9
e := 10755470
f := 7455701
count := 10
e := 18211171
f := 17111281
count := 11
e := 35322452
f := 25422353
count := 12
e := 60744805
f := 50844706
count := 13
e := 111589511
f := 115985111
count := 14
e := 227574622
f := 226475722
count := 15
e := 454050344
f := 443050454
count := 16
e := 897100798
f := 897001798
count := 17
e := 1794102596
f := 6952014971
count := 18
e := 8746117567
f := 7657116478
count := 19

$e := 16403234045$
 $f := 54043230461$
 $count := 20$
 $e := 70446464506$
 $f := 60546464407$
 $count := 21$
 $e := 130992928913$
 $f := 319829299031$
 $count := 22$
 $e := 450822227944$
 $f := 449722228054$
 $count := 23$
 $e := 900544455998$
 $f := 899554445009$
 $count := 24$
 $e := 1800098901007$
 $f := 7001098900081$
 $count := 25$
 $e := 8801197801088$
 $f := 8801087911088$
 $count := 26$
 $e := 17602285712176$
 $f := 67121758220671$
 $count := 27$
 $e := 84724043932847$
 $f := 74823934042748$
 $count := 28$
 $e := 159547977975595$
 $f := 595579779745951$
 $count := 29$
 $e := 755127757721546$
 $f := 645127757721557$
 $count := 30$
 $e := 1400255515443103$
 $f := 3013445155520041$
 $count := 31$
 $e := 4413700670963144$
 $f := 4413690760073144$
 $count := 32$
 $e := 8827391431036288$
 $f := 8826301341937288$
 $count := 33$

e := 17653692772973576
f := 67537927729635671
count := 34
e := 85191620502609247
f := 74290620502619158
count := 35
e := 159482241005228405
f := 504822500142284951
count := 36
e := 664304741147513356
f := 653315741147403466
count := 37
e := 1317620482294916822
f := 2286194922840267131
count := 38
e := 3603815405135183953
f := 3593815315045183063
count := 39
e := 7197630720180367016
f := 6107630810270367917
count := 40
e := 13305261530450734933
f := 33943705403516250331
count := 41
e := 47248966933966985264
f := 46258966933966984274
count := 42
e := 93507933867933969538
f := 83596933976833970539
count := 43
e := 177104867844767940077
f := 770049767448768401771
count := 44
e := 947154635293536341848
f := 848143635392536451749
count := 45
e := 1795298270686072793597
f := 7953972706860728925971
count := 46
e := 9749270977546801719568
f := 8659171086457790729479
count := 47

$e := 18408442064004592449047$
 $f := 74094429540046024480481$
 $count := 48$

$e := 92502871604050616929528$
 $f := 82592961605040617820529$
 $count := 49$

$e := 175095833209091234750057$
 $f := 750057432190902338590571$
 $count := 50$

$e := 925153265399993573340628$
 $f := 826043375399993562351529$
 $count := 51$

$e := 1751196640799987135692157$
 $f := 7512965317899970466911571$
 $count := 52$

$e := 9264161958699957602603728$
 $f := 8273062067599968591614629$
 $count := 53$

$e := 17537224026299926194218357$
 $f := 75381249162999262042273571$
 $count := 54$

$e := 92918473189299188236491928$
 $f := 82919463288199298137481929$
 $count := 55$

$e := 175837936477498486373973857$
 $f := 758379373684894774639738571$
 $count := 56$

$e := 934217310162393261013712428$
 $f := 824217310162393261013712439$
 $count := 57$

$e := 1758434620324786522027424867$
 $f := 7684247202256874230264348571$
 $count := 58$

$e := 9442681822581660752291773438$
 $f := 8343771922570661852281862449$
 $count := 59$

$e := 17786453745152322604573635887$
 $f := 78853637540622325154735468771$
 $count := 60$

$e := 96640091285774647759309104658$
 $f := 85640190395774647758219004669$
 $count := 61$

$e := 182280281681549295517528109327$
 $f := 723901825715592945186182082281$
 $count := 62$

$e := 906182107397142240703710191608$
 $f := 806191017307042241793701281609$
 $count := 63$

$e := 1712373124704184482497411473217$
 $f := 7123741147942844814074213732171$
 $count := 64$

$e := 8836114272647029296571625205388$
 $f := 8835025261756929207462724116388$
 $count := 65$

$e := 17671139534403958504034349321776$
 $f := 67712394343040585930443593117671$
 $count := 66$

$e := 85383533877444544434477942439447$
 $f := 74493424977443444544477833538358$
 $count := 67$

$e := 159876958854887988978955775977805$
 $f := 508779577559879889788458859678951$
 $count := 68$

$e := 668656536414767878767414635656756$
 $f := 657656536414767878767414635656866$
 $count := 69$

$e := 1326313072829535757534829271313622$
 $f := 2263131729284357575359282703136231$
 $count := 70$

$e := 3589444802113893332894111974449853$
 $f := 3589444791114982333983112084449853$
 $count := 71$

$e := 7178889593228875666877224058899706$
 $f := 6079988504227786665788223959888717$
 $count := 72$

$e := 13258878097456662332665448018788423$
 $f := 32488781084456623326665479087885231$
 $count := 73$

$e := 45747659181913285659330927106673654$
 $f := 45637660172903395658231918195674754$
 $count := 74$

$e := 91385319354816681317562845302348408$
 $f := 80484320354826571318661845391358319$
 $count := 75$

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e := 171869639709643252636224690693706727
f := 727607396096422636252346907936968171
      count := 76
e := 899477035806065888888571598630674898
f := 898476036895175888888560608530774998
      count := 77
e := 1797953072701241777777132207161449896
f := 6989441617022317777771421072703597971
      count := 78
e := 8787394689723559555548553279865047867
f := 768740568972355845559553279864937878
      count := 79
e := 16474800379447118011108106559729985745
f := 54758992795560180111081174497300847461
      count := 80
e := 71233793175007298122189281057030833206
f := 60233803075018298122189270057139733217
      count := 81
e := 131467596250025596244378551114170566423
f := 324665071411155873442695520052695764131
      count := 82
```

Warning, computation interrupted

> # This sequence seems to grow without bound. Matt C. Anderson 10 - 9 - 2016

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