```
 1: #!/usr/bin/perl
 2: # $Id: egyptian-div.perl,v 1.1 2019-04-03 16:17:52-07 - - $
 3:
 4: $0 =~ s|.*/||;
 5: print STDERR "Usage: $0 numerator denominator\n" and exit
 6: unless @ARGV == 2 and ($numer, $denom) = @ARGV
 7:        and $numer =~ m/^\d+$/ and $denom =~ m/^\d+$/;
 8:
 9: print "$0: verification: $numer / $denom = ", int $numer / $denom,
10:       " remainder ", $numer % $denom, "\n\n";
11:
12: $top = 1;
13: $right = $denom;
14:
15: while ($right <= $numer) {
16:    push @stack, [$top, $right];
17:    $top += $top;
18:    $right += $right;
19: }
20:
21: ($remdr, $quot) = ($numer, 0);
22: $fmt = "%12s %12s   %12s %12s\n";
23: while (@stack) {
24:    printf $fmt, "", "", $remdr, $quot;
25:    ($top, $right) = @{pop @stack};
26:    if ($right <= $remdr) {
27:       $remdr -= $right;
28:       $quot += $top;
29:       printf $fmt, $top, $right, "- " . $right, "+ " . $top;
30:    }else {
31:       printf $fmt, $top, $right, "- 0", "+ 0";
32:    }
33:    printf $fmt, "", "", "= " . $remdr, "= " . $quot;
34:    printf "\n";
35: }
36:
37: printf $fmt, "", "", "remainder", "quotient";
38:
39: __DATA__
40: //TEST// egyptian-division.perl 76543 123 >egyptian-division.out
41: //TEST// mkpspdf egyptian-division.ps \
42: //TEST//         egyptian-division.perl egyptian-division.out
```

```
egyptian-div.perl: verification: 76543 / 123 = 622 remainder 37

                                    76543            0
          512        62976        - 62976        + 512
                                  = 13567        = 512

                                    13567          512
          256        31488          - 0          + 0
                                  = 13567        = 512

                                    13567          512
          128        15744          - 0          + 0
                                  = 13567        = 512

                                    13567          512
           64         7872         - 7872         + 64
                                   = 5695        = 576

                                     5695          576
           32         3936         - 3936         + 32
                                   = 1759        = 608

                                     1759          608
           16         1968           - 0          + 0
                                   = 1759        = 608

                                     1759          608
            8          984          - 984          + 8
                                    = 775        = 616

                                      775          616
            4          492          - 492          + 4
                                    = 283        = 620

                                      283          620
            2          246          - 246          + 2
                                     = 37        = 622

                                       37          622
            1          123            - 0          + 0
                                     = 37        = 622

                                remainder     quotient
```