Pi Mu Epsilon
Problem of the Month
March 2024

Find the smallest positive integer, *x*, such that

- when *x* is divided by 2, the remainder is 1, and
- when 2*x* is divided by 3, the remainder is 1, and
- when 3*x* is divided by 4, the remainder is 1, and
- when 4*x* is divided by 5, the remainder is 1, and
- when 5*x* is divided by 6, the remainder is 1, and
- when 6*x* is divided by 7, the remainder is 1, and
- when 7*x* is divided by 8, the remainder is 1.