

# 宿題の解説

- 32と74の最大公約数をユークリッドの互除法を用いて求めよ。割った余りを使う方法と、引き算を使う方法の両方について示せ。
- $\text{GCD}(32, 74) = \text{GCD}(74, 32\%74) = \text{GCD}(74, 32) = \text{GCD}(32, 74\%32) = \text{GCD}(32, 10) = \text{GCD}(10, 32\%10) = \text{GCD}(10, 2) = \text{GCD}(2, 10\%2) = \text{GCD}(2, 0) = 2$
- $\text{GCD}(32, 74) = \text{GCD}(32, 74-32) = \text{GCD}(32, 42) = \text{GCD}(32, 42-32) = \text{GCD}(32, 10) = \text{GCD}(10, 32-10) = \text{GCD}(10, 22) = \text{GCD}(10, 22-10) = \text{GCD}(10, 12) = \text{GCD}(10, 12-10) = \text{GCD}(10, 2) = \text{GCD}(2, 10-2) = \text{GCD}(2, 8) = \text{GCD}(2, 8-2) = \text{GCD}(2, 6) = \text{GCD}(2, 6-2) = \text{GCD}(2, 4) = \text{GCD}(2, 4-2) = \text{GCD}(2, 2) = 2$