**Case 1:**

- Let **n = 1105.**

- Choose **a = 2** as a potential witness.

- Calculate **x = 2^{1104} mod 1105**

- Since x ≈ 1 mod 1105, the Fermat theorem test incorrectly concludes that n = 1105 is probably prime, even though it's composite.

**Case 2:**

- Let **n =1729**.

- Choose **a = 5** as a potential witness.

- Calculate **x = 5^{1728} mod 1729**

- Again, x ≈ 1 mod 1729, leading to an incorrect conclusion that n = 1729 is probably prime, even though it's composite.

**Case 3:**

- Let **n = 2465**

- Choose **a = 25** as a potential witness.

- Calculate **x = 25^{2464} mod 2465**

- Once more, x ≈ 1 mod 2465, leading to an incorrect conclusion that n = 2465 is probably prime, even though it's composite.