

Math 255 - Spring 2018
Suggested problems - Solving $x^2 \equiv a \pmod{2^k}$

There will be a quiz on this topic on Wednesday May 2.

1. Please give all solutions to the following equations:

(a) $x^2 \equiv 9 \pmod{16}$

(b) $x^2 \equiv 17 \pmod{32}$

(c) $x^2 \equiv 33 \pmod{64}$

(d) $x^2 \equiv 111 \pmod{128}$

(e) $x^2 \equiv 57 \pmod{64}$