Review of primitive roots

We will review a some points about primitive roots from before break.

Question 1 *For a prime p, a primitive root there exists modulo p.*

Multiple Choice:

(a) *Always* ✓

(b) *Sometimes*

(c) *Never*

Question 2 *If $n = pq$ where p and q are distinct primes, then there exists a primitive root modulo n.*

Multiple Choice:

(a) *Always*

(b) *Sometimes*

(c) *Never* ✓

Question 3 *If $n = 2^k$ and $k \geq 3$, then there exists a primitive root modulo n.*

Multiple Choice:

(a) *Always*

(b) *Sometimes*

(c) *Never* ✓

Learning outcomes:
Author(s):

Question 4 *If $n = km$ where k and m are relatively prime and greater than 2, then there exists a primitive root modulo n.*

Multiple Choice:

(a) *Always*

(b) *Sometimes*

(c) *Never* ✓

Question 5 *There exists primitive roots modulo n when for $n =$*

Select All Correct Answers:

(a) *1* ✓

(b) *p a prime* ✓

(c) *4* ✓

(d) *2^m for $m \geq 3$*

(e) *p^m for p an odd prime* ✓

(f) *$2p^m$ for p an odd prime* ✓

(g) *n a composite number with at least two distinct odd prime factors*
