FILL IN THE BLANK RING REVIEW

- Use the candidates below to fill in the following:
  _____ $\Longrightarrow$ _____ $\Longrightarrow$ _____ $\Longrightarrow$ _____ $\Longrightarrow$ _____.
  - domain
  - Euclidean domain
  - field
  - PID
  - UFD
- In a ring, unit _____ zerodivisor.
- A commutative ring has (exact) division by nonzero elements if it is a _____.
- A commutative ring has cancellation by nonzero elements if it is a _____.
- A commutative ring has division with remainder by nonzero elements if it is a _____.
- In a commutative ring, $(a) \subseteq (b) \Longleftrightarrow$ _____ (in terms of divides).
- In a commutative ring, $(a) = (b) \Longleftrightarrow$ _____ (in terms of divides).
- In a _____, $(a) = (b) \Longleftrightarrow$ _____ (word).
- In a _____, GCDs exist.
- In a _____, GCDs are unique _____.
- In a _____, maximal ideal $\Longrightarrow$ prime ideal.
- In a _____, prime ideal $\Longrightarrow$ maximal ideal.
- In a commutative ring R, I is a maximal ideal $\Longleftrightarrow R/I$ _____.
- In a commutative ring R, I is a prime ideal $\Longleftrightarrow R/I$ _____.
- In a _____, prime element $\Longrightarrow$ irreducible element.
- In a _____, irreducible element $\Longrightarrow$ prime element.