Constant Expressions Solutions

Constant expression

- What is meant by the term "constant expression"?
  - A constant expression has a value that is evaluated at compile time and which cannot change
- Give some examples of constant expressions
  - A literal
  - A value computed from literals
  - A value computed from other constant expressions

Constant expression variables

- Can a variable be a constant expression? Write a simple program to illustrate your answer
  - A variable can be a constant expression if
  - It is initialized by a constant expression
  - and it cannot subsequently be modified

constexpr keyword

- What is the significance of the constexpr keyword?
  - The constexpr keyword indicates that an expression is a constant expression
  - An expression which is evaluated at compile time and cannot change

constexpr vs const

- What is the difference between a "const" variable and a "constexpr" variable?
  - A const variable cannot be modified
  - A const variable can be initialized from a constant expression
  - A const variable can also be initialized from a value which is only known at runtime
  - A constexpr variable cannot be modified
  - A constexpr variable can only be initialized from a constant expression