

MTH 132 Gateway Exam

MTH 132 Gateway Exam I Content :

- Time allowed: 50 minutes.
- Passing Score: 8/10 Problems.
- This is a review of high school material needed for the Calculus class. A more detailed description is given below.

MTH 132 Gateway Exam I Topics Example :

- Expand a given binomial product (squares and products of conjugates.)
- Simplify nested roots of a single variable.
- Factor $(ax^2 - bx + c)$, then solve one of:

$$ax^2 - bx = -c, \quad ax^2 + c = bx, \quad ax^2 = bx - c$$

- Sketch the graphs of a pair of simple functions, one from each of two sets.
- Simplify compound rational expressions as much as possible.
- Simplify expressions involving the distributive rule.
- Find the point-slope equation of a straight line from a verbal description.
- Find the equation of a line from a sketch of its graph. Rational slopes and integer y -intercepts involving small integers only.
- Sketch a standard triangle ($30-60$ or $45-45$), label its sides, then evaluate two standard trigonometric functions at corresponding acute angles.
- Sketch the graph of the sine (or cosine or tangent) function on a particular interval. Then evaluate that function at two points that lie within the sketched domain.

MTH 132 Gateway Exam II Content :

- Time allowed: 50 minutes.
- Passing Score: 6/8 Problems.
- This is a review of what has been covered in the first half of the course. The problems in the exam are similar to the average problems used in homeworks in the Schedule.

MTH 132 Gateway Exam II Topics Example :

- Simplify expressions involving powers and radicals.
- Find the derivative using the chain rule for powers of polynomials, sometimes with intricate constants.

- Find the derivative of products of powers of polynomials and trigonometric functions of linear functions by using the product rule.
- Find the derivative of quotients of powers of polynomials and trigonometric functions of linear functions by using the quotient rule.
- Problems (5)-(8): Find the derivative of various expressions.