Programming Logic - Beginning
152-101

Math Program Evaluation Form

☑ Update Recommended

Math Project
☐ (½ point)   Appropriate project icon (can be same as window icon)
☐ (½ point)   Window file names match window object names (wndXxxx).

Welcome Screen
☐ (½ point)   Window centered on screen
☐ (½ point)   Window title is appropriate
☐ (½ point)   Window includes application name
☐ (½ point)   Window appearance is professional
☐ (½ point)   Timer included that closes window after 5 seconds
☐ (½ point)   Button included to start application immediately
☐ (½ point)   Button included to exit application immediately (Cancel button)
☐ (½ point)   Method documentation (grammatically correct) included for all methods

Window Layout
☐ (½ point)   Appropriate window icon
☐ (½ point)   Window centered on screen
☐ (½ point)   Window title is appropriate
☐ (½ point)   Group boxes used to group similar items
☐ (½ point)   Group boxes are appropriately labeled
☐ (½ point)   Textboxes used to allow user to enter two numbers
☐ (½ point)   Labels used to display six math equations
☐ (½ point)   Window includes appropriate piece of clipart
☐ (½ point)   All window objects appropriately labeled
☐ (½ point)   Window objects have professional layout
☐ (½ point)   Tab order is appropriate

☐ (½ point)   All window objects referenced in code are appropriately named
☐ (½ point)   Button access keys are appropriate
☐ (½ point)   Calculate button is window Default button
☐ (½ point)   Clear button is window Cancel button

Calculate Click Event
- ☐ (½ point)   Variables created for all inputs
- ☐ (½ point)   Variables created for all outputs
- ☐ (½ point)   Inputs are integers
- ☐ (½ point)   Output are integers, except for division (double)
- ☐ (½ point)   Variables have appropriate names (camelCase), types and descriptions (comments)
- ☐ (½ point)   Try-Catch used to catch input errors
- ☐ (½ point)   Error message appropriate

- ☐ (½ point)   All input values properly converted to variables
- ☐ (½ point)   Equation results calculated correctly
- ☐ (½ point)   Division calculation correctly calculates a double
- ☐ **(+½ point)** Try-Catch block used to prevent division by zero (or If statement)

- ☐ (½ point)   Equations use concatenation correctly
- ☐ (½ point)   Division results displayed with 2 decimal places
- ☐ (½ point)   Integer division equation displays backslash
- ☐ (½ point)   Modulus equation displays *mod*
- ☐ (½ point)   Focus set to Clear button after all processing complete

Clear Click Event
- ☐ (½ point)   Two inputs cleared
- ☐ (½ point)   All output labels cleared
- ☐ (½ point)   Focus set to first number

Exit Click Event
- ☐ (½ point)   Program exits properly

Window Initialized Event
- ☐ (½ point)   DatePicker DisplayDate initialized to current date (in xaml)
- ☐ (½ point)   Welcome Screen object is initialized and displayed
- ☐ (½ point)   MainWindow is hidden until after the welcome screen is completed

Indentation
- ☐ (½ point)   Source code indented properly

Challenge Points

☐ **(+1 point)** If all requirements met
- ☐ (½ point) Program inserts ÷ in division equation
- ☐ (½ point) ÷ **not** inserted in integer division and modulus equations

☐ **(+1 point)** If all requirements met (limited to +1 for all unit 4 programs)
- ☐ (½ point) Version number displayed on the window
- ☐ (½ point) Version number displayed in an appropriate location
- ☐ (½ point) Version number defined using a constant
- ☐ (½ point) Version constant added to window

☐ **(+1 point)** If all requirements met (limited to +1 for all unit 4 programs)
- ☐ (½ point) Exit button anchored to bottom right
- ☐ (½ point) Calc and Clear buttons anchored to bottom left
- ☐ (½ point) Version number (if provided) anchored appropriately

Window Level Documentation

- ☐ (½ point) Methods alphabetized
- ☐ (½ point) Spacing used to make code readable
- ☐ (½ point) Appropriate in-line comments included

- ☐ (½ point) Each method includes a purpose description.
- ☐ (½ point) Purpose descriptions use complete sentences, grammatically correct, without spelling errors.
- ☐ (½ point) Purpose descriptions are accurate

Program Documentation

- ☐ (½ point) Documentation module created
- ☐ (½ point) Documentation appearance is professional
- ☐ (½ point) Program name included
- ☐ (½ point) Student's name included
- ☐ (½ point) Program date included
- ☐ (½ point) Program's purpose uses complete sentences, is grammatically correct, without spelling errors.
- ☐ (½ point) Program's purpose is accurate and complete

- ☐ (½ point) Windows listed alphabetically
- ☐ (½ point) Window purpose descriptions use complete sentences, grammatically correct, without spelling errors.
- ☐ (½ point) Window purpose descriptions are accurate and complete

- ☐ (½ point) Change log included
- ☐ (½ point) (Updates only) Updates documented in change log

Program Design

- ☐ (½ point)   btnCalc sequence of commands same in design and code

- ☐ (½ point)   btnClear sequence of commands same in design and code

- ☐ (½ point)   Variable and object names in code same as in design

- ☐ (½ point)