

1. Make a program that calculates the absolute value of a number
  - User is prompted for a number and the program prints out its absolute value
2. Make a program that checks whether the character that the user entered is a lower-case letter, capital letter, special character, or a number.
3. Make a program that checks whether the entered year is a leap year
  - The year is entered as an `int`
  - The program displays the text `"leap year"` or `"common year"`
4. Make a program that will check whether the solution to

$$\frac{(x-5) \cdot (x-3)}{(x-2)}$$

is positive or negative, and whether it exists at all.

5. Make a program that calculates the solutions to a quadratic equation
  - Program prompts for parameters to the equation  $ax^2 + bx + cx = 0$
  - Program prints out the number of solutions
    - \* Rational or irrational
  - And then prints out the solutions  $(x_1, x_2)$
6. Make a program to check whether one number is divisible by the second number. User inputs both numbers. Program then performs the check and prints out whether they are divisible. If the user tries to divide by zero, print out an error.
7. Make a program that prints out the grade of a student based on his test score:
  - 0 - 54 - The student failed
  - 55 - 64 - Six
  - 65 - 74 - Seven
  - 75 - 84 - Eight
  - 85 - 94 - Nine
  - 95 - 100 - Ten
8. Make a program that prompts the user for input of three numbers. The program then prints out the three numbers sorted from lowest to highest.