Rational Arithmetic Evaluation

- `MyRational` is used to store the rational number.

```
-- MyNum Numerator Denominator
data MyRational = MyNum Integer Integer
-- Example:
    -- MyNum 3 4 == 3/4
```

- Define the symbol `%`, and determine whether the denominator is `0`.

```
(%) :: Integer -> Integer -> MyRational
a % b
  |b==0 = error "divide by zero"
  |otherwise = MyNum a b
-- Example:
    -- (-3)%4 == MyNum (-3) 4
    -- 6%0 => divide by zero
```

- Instance `Eq` for `MyRational`.

```
instance Eq MyRational where
  (MyNum a b) == (MyNum c d) ... -- Equality
-- Example:
    -- (1%2) == (4%8) => True
    -- (1%2) /= (4%8) => False
```

- Function to reduce rational number.

```
reduction :: MyRational -> MyRational
reduction (MyNum a b) ...
-- Example:
    -- reduction (2%4) => 1 % 2
```

- Function to set the minus `-` at the right position of the rational number.

```
symbolReset :: MyRational -> MyRational
symbolReset (MyNum a b) ...
-- Example:
    -- symbolReset (2%(-3)) => (-2) % 3
    -- symbolReset ((-2)%(-3)) => 2 % 3
```

- Instance `Num` for `MyRational`.

```
instance Num MyRational where
  (MyNum a b) + (MyNum c d) ... -- Plus
  (MyNum a b) * (MyNum c d) ... -- Multiply
  negate (MyNum a b) ... -- Opposite number
  abs (MyNum a b) ... -- Absolute value
  signum (MyNum a b) ... -- Sign of the rational number
  fromInteger a ... -- Convert integer to rational number
-- Example:
    -- ((-2)%7) + (2%4) => 3 % 14
    -- ((-2)%7) - (2%4) => (-11) % 14
    -- ((-2)%7) * (2%4) => (-1) % 7
    -- negate (5%6) => (-5) % 6
    -- abs ((-3)%7) => 3 % 7
    -- signum ((-5)%4) => -1
    -- fromInteger (-5) => -5
```

- Define the symbol `/`.

```
(/) :: MyRational -> MyRational -> MyRational
(MyNum a b) / (MyNum c d) ... - Divide
-- Example:
    -- ((-2)%7) / (2%4) => (-4) % 7
    -- ((-2)%7) / (0%1) => divide by zero
```

- Instance `Show` for `MyRational`.

```
instance Show MyRational where
  show (MyNum a b) ...
-- Example:
    -- 2%1 => 2
    -- 5%10 => 1 % 2
    -- 4%(-3) => (-4) % 3
    -- ((-2)%1) / (1%7) => -14
```