Assignment 8

1. Add the numbers (base 2):
   \[ \frac{0.1121}{2} + \frac{0.011}{2} + \frac{0.010}{2} + \frac{0.101}{2} \]

   - 1.011
   - 0.011
   - 1.010
   - 0.010
   - None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - 1.101
   - 1.011
   - 1.100

2. The widening division algorithm uses:

   - Left shift operations
   - Right shift operations
   - Spill and fill
   - None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - Left shift operations
   - Right shift operations
   - Spill and fill

3. The time-complexity of the restoring algorithm is:

   - \(O(\theta^2)\)
   - \(O(\theta^3)\)
   - \(O(\log\theta)\)
   - \(O(1)\)
   - None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - \(O(\theta^2)\)
   - \(O(\theta^3)\)
   - \(O(\log\theta)\)

4. Condition for incrementing the significant in the “round to the nearest” rounding mode when the sign of the result is negative:

   \[ \text{Positive} + \text{0.0} \text{ Off} \quad \text{Positive} = 0.0 \text{ FFO0000} \]

   - Positive + 0.0 Off (Positive = 0.0 FFO0000)
   - Positive + 0.0 (Positive = 0.0 FFO0000)
   - Positive + 0.0 (Positive = 0.0 FFO0000)
   - Positive + 0.0 (Positive + 0.0 FFO0000)

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - Positive + 0.0 Off (Positive = 0.0 FFO0000)
   - Positive + 0.0 (Positive = 0.0 FFO0000)
   - Positive + 0.0 (Positive = 0.0 FFO0000)

5. Which of the following issue division algorithm:

   - Restoring algorithm
   - Non-Restoring algorithm
   - Goldschmidt algorithm
   - All of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - All of the above

6. The time complexity of the Goldschmidt algorithm is:

   - \(O(\log\theta)\)
   - \(O(\log(\theta^2))\)
   - \(O(\log^2\theta)\)
   - \(O(1)\)

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - \(O(\log\theta)\)
   - \(O(\log(\theta^2))\)
   - \(O(\log^2\theta)\)

7. In the Newton-Raphson method the error _______ with every iteration.

   - increases
   - decreases
   - remains same
   - gets repeated
   - gets reversed
   - None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - remains same
   - increases
   - decreases
   - gets repeated
   - gets reversed

8. The time complexity of multiplying two floating point numbers is:

   - \(O(1)\)
   - \(O(\log\theta)\)
   - \(O(\log^2\theta)\)
   - \(O(\theta^2)\)

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - \(O(1)\)
   - \(O(\log\theta)\)
   - \(O(\log^2\theta)\)

9. Choose the most appropriate response. The process of division needs to satisfy the following property:

   - \(a \cdot \frac{1}{b} = \frac{a}{b}\)
   - \(a \cdot \frac{1}{b} = a \cdot b\)
   - \(a \cdot \frac{1}{b} = a\)
   - \(a \cdot \frac{1}{b} = b\)
   - None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   - \(a \cdot \frac{1}{b} = \frac{a}{b}\)

10. Floating point division is fundamentally _______ operation than integer division.

    - Simpler
    - Generic
    - Faster
    - None of the above

    No, the answer is incorrect.
    Score: 0
    Accepted Answers:
    - Faster