1 two's complement representation

let a three bits system using the two's complement approach to represent values be considered

- let 'x' be a value, how the two's complement version of the said value might it be determied?
- let 'x' be a value, let 'y' be the two's complement version of the said value, what the statment 'x + y' might it produce?
- let a value be represented as '100', how the two's complement version of the said value might look like?
- what the statement '100 + 100' might it produce?

let a three bits system using the two's complement approach to represent values be considered

- how the expression '-2 + 3' might it be evaluated?
- the expression '3 - 2' might it be evaluated using addition operation?

let a three bits system using the two's complement approach to represent values be considered

- how the expression '2 + 2' might look like?
- how the expression '-3 -3' might look like?
- what the word overflow might it be used to indicate?

let a three bits system using the two's complement approach to represent values be considered

- how overflow might it be detected?
- how a digital logic circuit to detect overflow might look like?

2 addition of three bits

- how many bits might be needed to represent the result when adding three bits?

3 full adder

- the following two words ‘full adder’ they might be used to indicate what?

4 adding two words of two bits each

- how an adder which adds two words of two bits each might be built?
- how many full adders might be needed to build an adder which adds two words of two bits each?

5 adding two words of four bits each

- how an adder which adds two words of four bits each might be built?
- how many full adders might be needed to build an adder which adds two words of four bits each?

6 ripple carry adder

- the following three words ‘ripple carry adder’ they might be used to indicate what?

- let suppose that completing the addition operation by a full adder requires one second, let suppose that four of this full adder were used to build a ripple carry adder, then completing the addition, of two words of four bits each, by this full adder how long might it require?

let the word unit be used to indicate a unit which adds two words of two bits each

- might it be possible to build an adder which adds two words of four bits each by using two units?

let the word unit be used to indicate a unit which adds two words of two bits each

- might it be possible to use three units to build an adder which adds two words of four bits each?

7 carry select adder

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