

Answer 1)

The verilog code for the simple calculator is shown below with Add, subtract, multiplication and 2nth power support

```
module Calculator (A, B, Sel, Y);
input [7:0] A, B;
input [2:0] Sel;
output [15:0] Y;

reg [15:0] Y;

always @(Sel)
begin
case(Sel)
2'b00 : Y = A + B; // Addition operation
2'b01 : Y = A - B; // Subtraction operation
2'b10 : Y = A * B; // Multiplication
2'b11 : Y = 2 ** A; // 2 nth power of A
endcase
end

endmodule
```