Note: You are allowed to open the provided slide on ADC.

Question 0 (2 Points):
Are you participating in this class test honestly? (YES/NO)

Question 1 (4 + 6 = 10 Points):
Say, you have read ADCH before ADCL in the scenario below. ADC is left adjusted, Reference is AVCC. What will be the pattern of the value of "voltage"? Clearly _explain the reason._ (Hint: "voltage" will not be some random garbage value).

```c
float step_size = 5.0 / 1024.0;
while(1)
{
    // Read Analog value
    ADCSRA |= (1 << ADSC);
    while(ADCSRA & (1 << ADSC));
    uint16_t adc = (ADCH << 2) | (ADCL >> 6);
    float voltage = adc * step_size;
}
```

Question 2 (4 + 4 = 8 Points):
For ATmega32, suppose ADMUX = 11010000. We have connected ADC0 to 2V and ADC1 to 1V. What is the value of ADC after conversion? Write the value in a 10 bit binary number. Also show the steps.