**W2D3**

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**Question**:

(964, 17), (1488, 63), (2240, 24), (3168, 32)

**Answer**:

**Step 1:** Remove every symbol, just keep numbers

964 17 1488 63 2240 24 3168 32

**Step 2:** Apply d-gap

964 17 524 63 752 24 928 32

**(A) VarInt**

964 = 1111000100

17 = 10001

524 = 1000001100

63 = 111111

752 = 1011110000

24 = 11000

928 = 1110100000

32 = 100000

00000111 11000100 10010001 00000100 10001100 10111111 00000101 11110000 10011000 00000111 10100000 10100000

**(B) Simple 9**

Number: 964 17 524 63 752 24 928 32

Number of bit: 10 5 10 6 10 5 10 6

0111 00001111000100 00000000010001

0111 00001000001100 00000000111111

0111 00001011110000 00000000011000

0111 00001110100000 00000000100000

**(C) Bit Aligned**

964 - 512 (2^9) = 452 = 1110001002

17 - 16 (2^4) = 1 = 1

524 - 512 (2^9) = 12 = 1100

63 - 32 (2^5) = 31 = 11111

752 - 512 (2^9) = 240 = 11110000

24 - 16 (2^4) = 8 = 1000

928 - 512 (2^9) = 416 = 110100000

32 - 32 (2^5) = 0 = 0

111111111 0 111000100 1111 0 0001 11111111 0 000001100 11111 0 11111 111111111 0 011110000 1111 0 1000 111111111 0 110100000 11111 0 00000